

QUALITY SHOWCASE

A showcase of patient safety and quality
initiatives from District of Columbia hospitals



2024 POSTER EDITION



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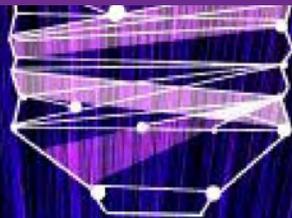


**Pediatricians' Perspectives on Disaster Education:
Insights from a Survey of the District of Columbia, Maryland, and Virginia**



Children's National.

Tress Goodwin, MD & Dennis Ren, MD



Pediatricians' Perspectives on Disaster Education: Insights from a Survey of the District of Columbia, Maryland, and Virginia

ROSS GOODWIN, MD and DENNIS KELL, MD

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RESEARCH SCOPE

This research explores the effectiveness of various media forms in conveying disaster information to physicians. With physicians playing a critical role in disaster response, it's essential to understand which media channels provide the most clear and actionable information. This information is crucial for healthcare leaders to effectively inform their staff during an ongoing disaster.

METHODOLOGY

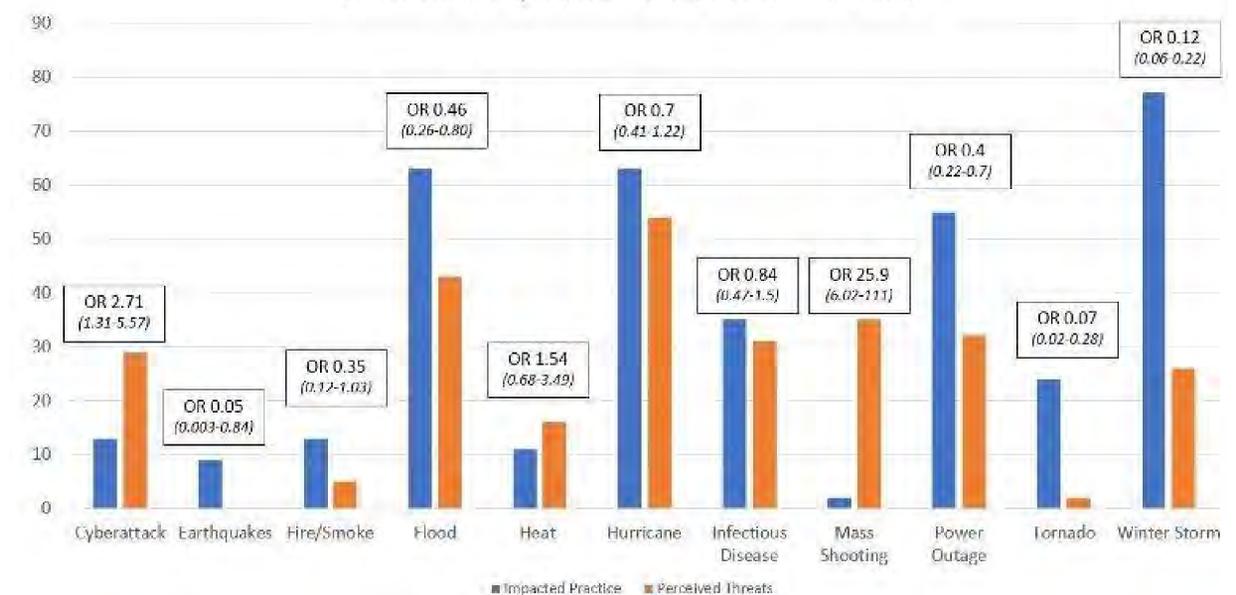
A survey was conducted among pediatricians in Washington D.C., Maryland, and Virginia. We collected data on personal disaster experiences, perceived threats, and preferences for educational resources. Descriptive statistics and odds ratios were used to analyze the data.

Participant Demographics and Practice (total participants n=104)

Generation	
Generation Z (1997-2012)	3
Millennial (1981-1996)	49
Generation X (1965-1980)	46
Boomers (1946-1964)	6

Practice Setting	
Hospital/Health System/Academic	76
Community Clinic/FQHC	22
Private Practice	6

Disasters that Impacted Practice vs. Perceived Threats



PREFERRED SOURCE OF DISASTER EDUCATION

- More popular during disasters: Social media and electronic newsletters were used more during disasters. Social media use jumped from 18% in routine practice to 41% in disasters.
- Less popular during disasters: Podcasts and professional societies were used less during disasters. Podcast use dropped from 40% to just 8%.
- Stayed the same: Blogs, information from employers, and national or city agencies were used about the same in both routine times and disasters.
- Traditional resources: Textbooks, conferences, and scientific articles stayed low in use both during routine practice and disasters.

IMPLICATIONS FOR HEALTH CARE LEADERS AND ORGANIZATIONS

- Pediatricians need specific training for disasters, especially on issues like cyberattacks and mass shootings.
- During disasters, they prefer getting quick information through digital platforms, so healthcare organizations should focus on using these tools for education.
- Future education should be delivered in digital formats that pediatricians find easy to use and helpful during emergencies.
- Training programs should be designed to provide fast, useful information, especially when time and resources are limited during disasters.

Acknowledgements:
Julie Krueger, MD
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Balancing Liability, Risk, and Patient Autonomy in a Hospital's Medical Emergency Response System



Children's National.

Emily J. Dorosz, MSN, RN, CPEN, CPN; Amanda Alleyne, BSN, MBA, MHA, RN;
and Kelly Williams, MSN, RN, CEN, CPN, CPEN, NPD-BC, CNE, TCRN



Balancing Liability, Risk, and Patient Autonomy in a Hospital's Medical Emergency Response System

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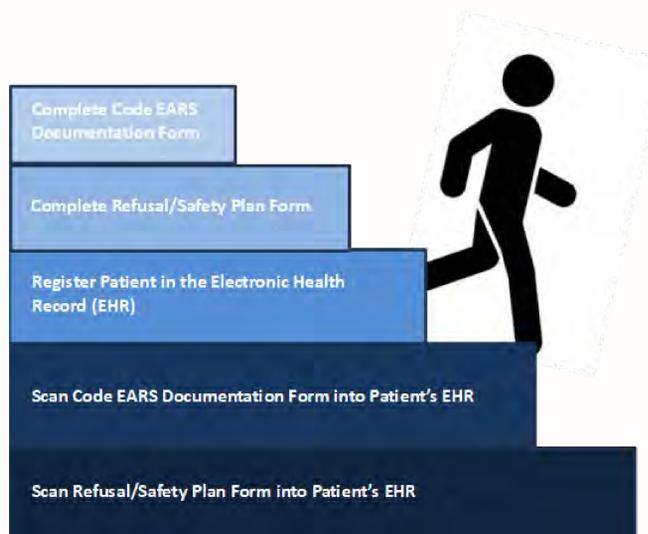
Objective:

Ensure patient and staff safety while respecting patient autonomy through increasing compliance with protocols and documentation standards in Code EARS non-transports.

Background:

In October 2021, Children's National Hospital divided their medical emergency response system into two tiers based on patient type. Code EARS (Emergency Ambulatory Response System) team assists outpatient, staff, and visitors in an emergency. The team consists of an Emergency Department (ED) Nurse, ED Tech, Respiratory Therapist, Security Officer, and Nurse Administrator. Most Code EARS patients are transported to the ED; those who decline care for themselves or their minor child are considered a Code EARS non-transport event. The Nurse-led team must balance patient and parent rights with liability in these cases as a non-transport response does not include a medical screening exam (MSE).

Five Steps to Success for Code EARS Patient Refusals

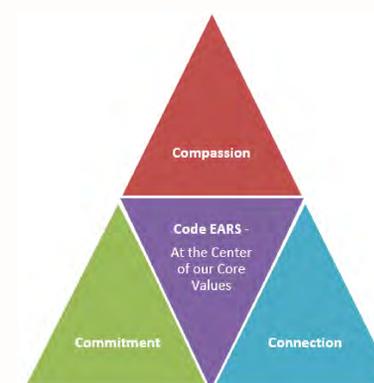
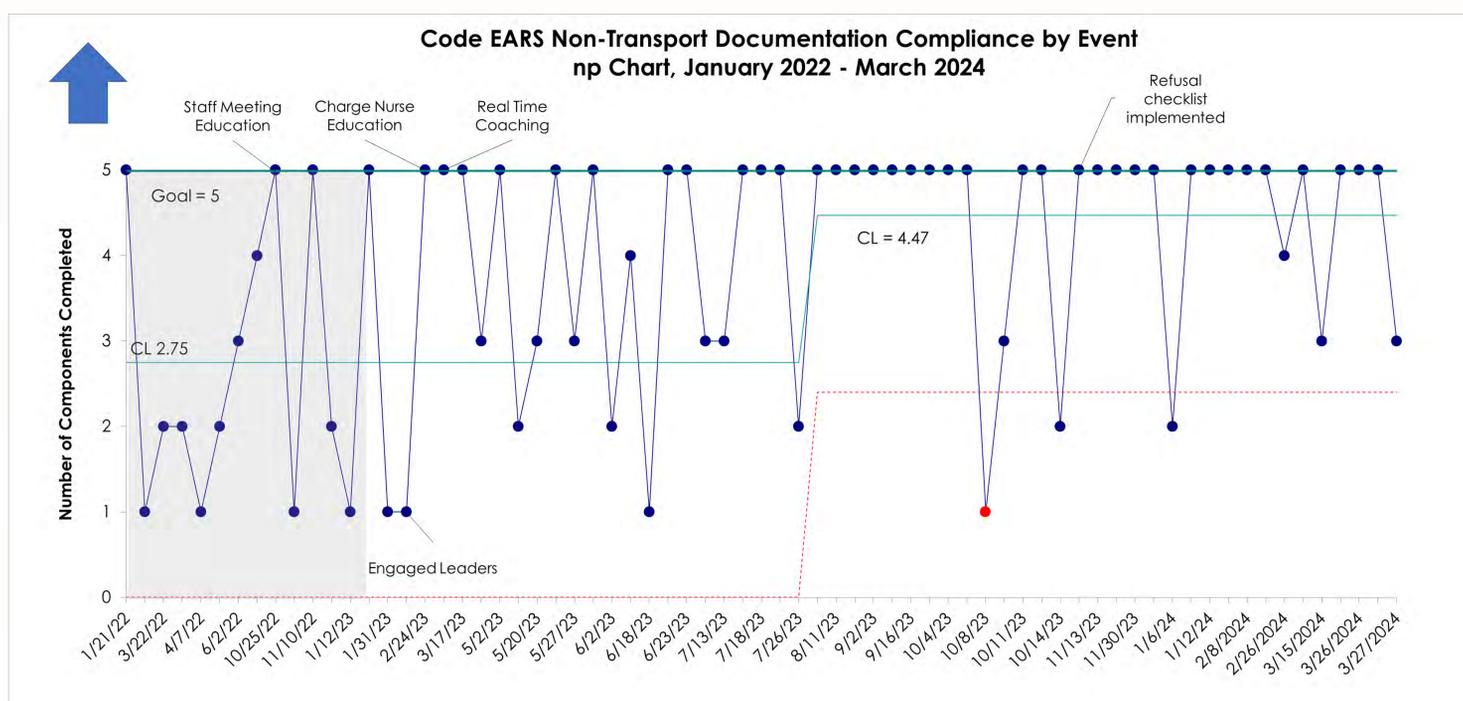


Design/Methods:

Apply the Institute for Healthcare Improvement (IHI) Model to improve process and documentation compliance with Code EARS non-transport events including refusals of care, safety plans, and alternate destinations. From October 2021 to December 2022, 193 Code EARS were called, only 20 of which resulted in a non-transport event. Process and documentation standards that should be followed in every non-transport event to ensure patient and staff safety include: 1 – documentation form completed, 2 – refusal/safety plan form completed, 3 – patient registered in the electronic health record (EHR), 4 – documentation form attached to the patient's EHR, and 5 – refusal/safety plan form attached to the patient's EHR. Out of the five process and documentation standards for non-transport events, the Code EARS team was compliant with a baseline average of 2.75 out of 5 elements and the data showed a high degree of variability. The team implemented several Plan-Do-Study-Act (PDSA) cycles during 2023 to improve compliance with this process.

Results/Discussion:

Following the PDSA cycles in 2023, the average compliance with process and documentation standards increased from 2.75 out of 5 elements to 4.47 out of 5 elements. While most patient encounters included 100% (5 out of 5) standards completed, there are still intermittent cases in which 1-4 of the required elements are missing. This reveals an opportunity to address consistency and reliability of the process through the design and implementation of future improvement efforts.



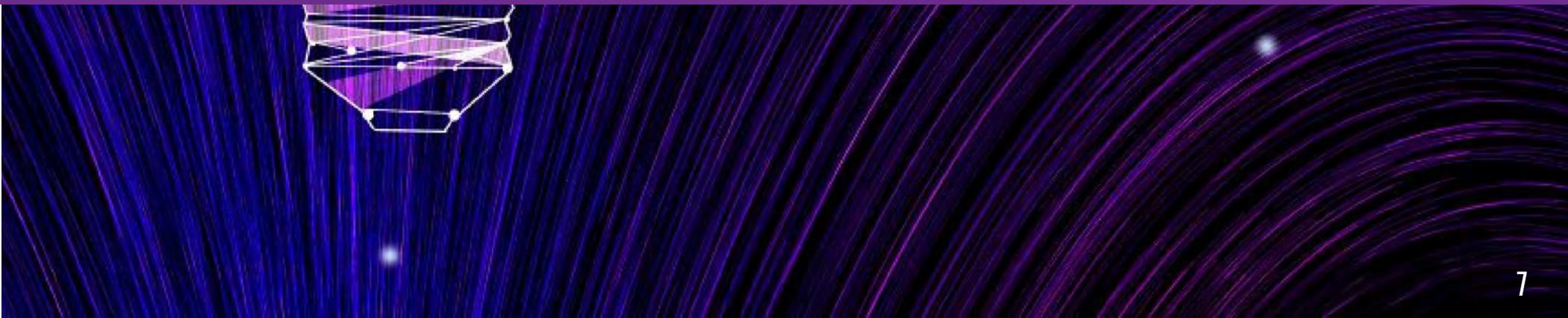


Tiny Troublemakers, Big Solutions: A Pilot Project to Provide Targeted Safety Equipment to Families in the Emergency Department



Children's National

Jennifer Cook, BS; Michaela Brown, PA-C; Lenore Jarvis, MD, MEd; Kimberly Russell, LICSW;
Alexandra Rucker, MD; and Jillian Nickerson, MD, MS



Tiny Troublemakers, Big Solutions: A pilot project to provide targeted safety equipment to families in the emergency department



Children's National®

Jennifer Cook, BS; Michaela Brown, PA-C; Lenore Jarvis, MD, MEd; Kimberly Russell, LICSW; Alexandra Rucker, MD; Jillian Nickerson, MD, MS
 jnickerso2@childrensnational.org

BACKGROUND

- Unintentional injuries = leading cause of morbidity and mortality in children¹
- Injury prevention tools
 - disparities in access → under-resourced children at higher risk²



Objective: To assess feasibility of providing directed and equitable household safety items in the emergency department (ED)

METHODS



Please complete this survey about safety items for babies and toddlers.

Gates placed at the top of stairs or in doorways are used to keep toddlers away from dangerous areas of the home.
 Do you need a safety gate for your home? Yes No

Stove and oven knob covers are used to prevent young children from having access to the stove and oven knobs.
 Do you need stove/oven knob covers for your home? Yes No

Cabinet locks are used to prevent toddlers and young children from getting into cabinets where dangerous products could be stored.
 Do you need cabinet locks for your home? Yes No

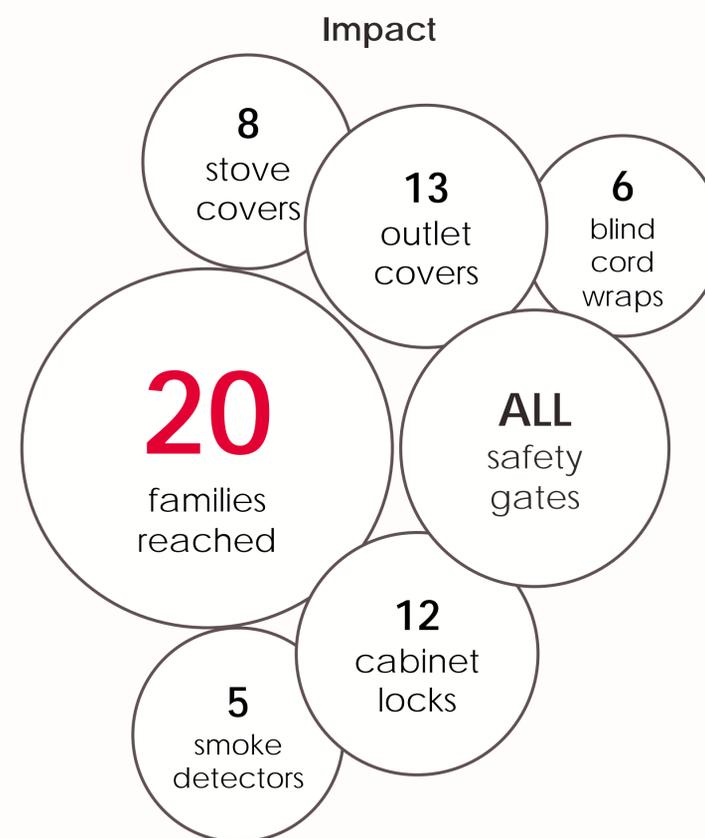
Smoke and carbon monoxide detectors are used to alert families to smoke, fires, and/or carbon monoxide.
 Do you need a smoke/carbon monoxide detector for your home? Yes No

Blind cord wraps are used to prevent blind cords from dangling. Dangling cords can strangle children who get caught in the cords.
 Do you need blind cord wraps for your home? Yes No

Outlet covers are used to prevent young children from touching or sticking things in electrical outlets.
 Do you need outlet covers for your home? Yes No

If you checked "yes" for any item, someone from our staff will bring it to you before you leave the ED.

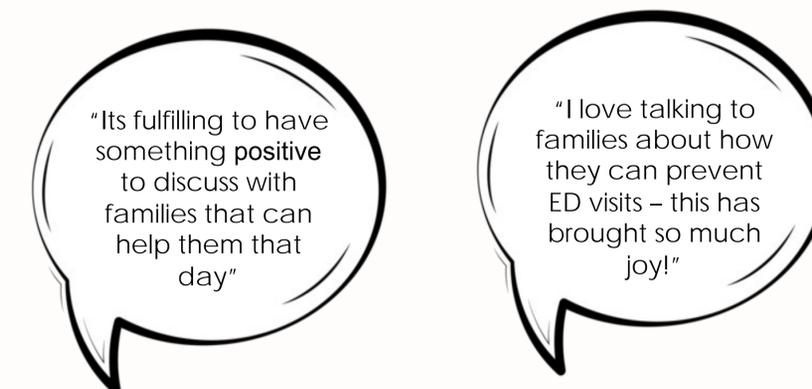
RESULTS



Future Items of Interest



Staff significance



CONCLUSIONS

- Families receptive to receiving safety items
- Staff reported fulfilled following interactions
- Providing educational materials regarding safety could increase parents' use of equipment³
- Future initiatives:
 - Focus on items that families were most interested in
 - assess the use and impact of items distributed

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Enhancing Pediatric Emergency Care Through Interdisciplinary Code Reviews: A Performance Improvement Initiative



Children's National[®]

Susan Barba, MD; Jesse Theisen-Toupal, MD; Cherinne Arundel, MD; Jessica Logan, MD



Enhancing Pediatric Emergency Care through Interdisciplinary Code Reviews: A Performance Improvement Initiative

Jillian Nickerson, MD, MS; Kelly Williams, MSN, RN, CEN, CPN; Kamil Barker DNP, RN, CPN, CNE
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BACKGROUND

Pediatric codes, traumas, and critically ill patients

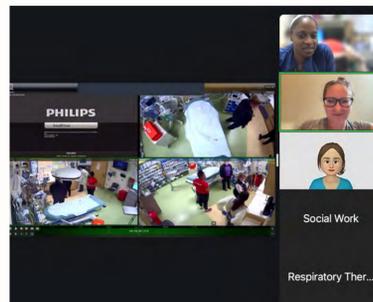
- Require skilled interdisciplinary team
- frequency, stress
- Community Emergency Departments (ED)
- Limited subspecialty support

METHODS

Monthly virtual code review

Interdisciplinary:

- Physicians, PAs, NPs
- Nurses, emergency techs
- Respiratory therapists
- Social work
- Transport team
- Subspecialty services



Safety improvement focus:

- Cases highlight threats to patient safety
- Focus on process improvement.
- Participants develop safety initiatives

Case follow up:

- Motivated team implement changes from ideas generated

RESULTS

September 2023-August 2024
 Median 13 participants



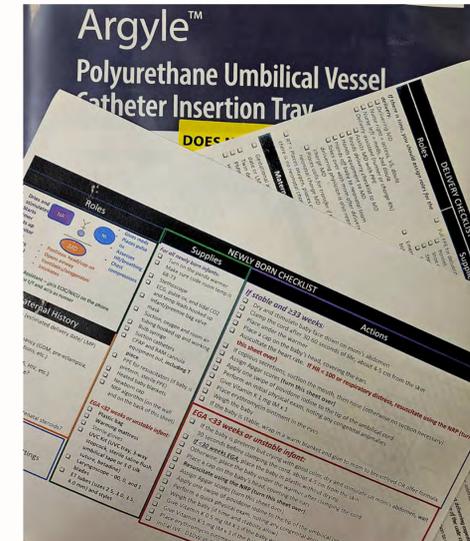
All rated excellent or good

Topics covered

Altered Mental Status (AMS)	• Management of complex social situation
Cardiac Arrest	• Team Leadership
CPR	• Ending a code
Gunshot wound	• Importance of secondary survey
Hypocalcemic Seizure	• Rare medical management
Multi-trauma	• Trauma policy
Myocarditis	• External pacing
Neonatal Resuscitation	• Medical Care
Post-intubation	• Best Practices of sedation
Seizure	• Closed Loop Communication
Septic vs. Cardiogenic Shock	• Use of POCUS
Septic Newborn	• Best options for access

Initiatives

- ✓ Hands on faculty UVC skill training
- ✓ Checklists for newborn delivery and neonatal resuscitation
- ✓ Standardized sedation plan for post-intubation patients
- ✓ Updated trauma policy
- ✓ Enhanced policy for patients going to CT



We are collecting on-going data regarding clinical impact of these improvements.



CONCLUSIONS

Quality improvement projects generated by an interdisciplinary team from real patient encounters results in staff engagement in changes that improve patient care.

REFERENCES

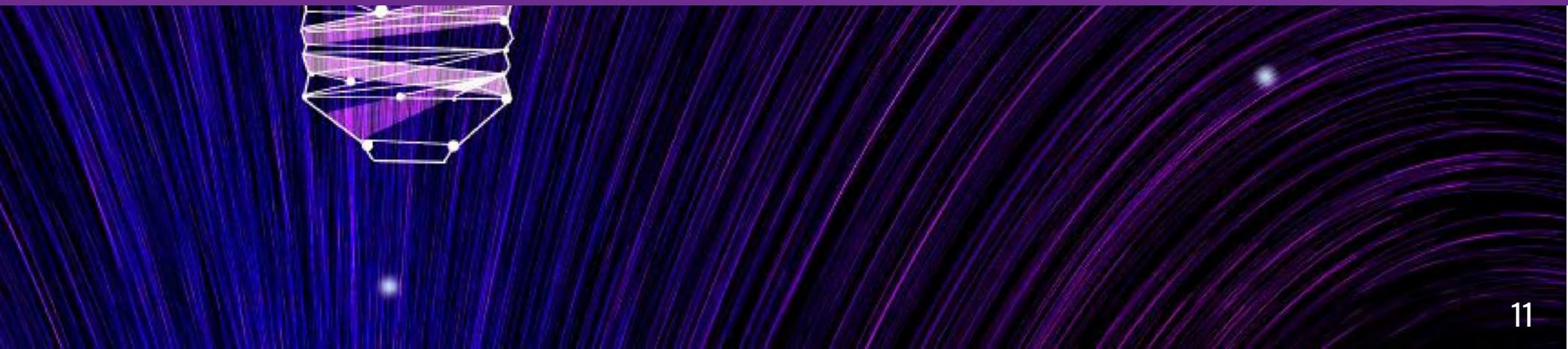
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Measures to Improve SEP-1 Bundle Compliance in the Emergency Department



Lorena Almendarez-Penalba & Gina Wilson



MEASURES TO IMPROVE SEP-1 BUNDLE COMPLIANCE IN THE EMERGENCY DEPARTMENT AT HOWARD UNIVERSITY HOSPITAL (HUH)

Lorena Velazquez MD - Primary Investigator, Daniel Case MD, Danielle Blair MS, Gina S. Wilson MD, Robert Linton II MD, MBA.



INTRODUCTION

In the first phase of the strategic initiative, the emergency department's management of severe sepsis and septic shock was assessed, with a focus on treatment delays, documentation, and adherence to sepsis bundle guidelines. Prior to the initiation of the project, compliance with the SEP-1 bundle was critically low, at 14%, with previous rates dropping to 0% in February and March 2023. This baseline data highlighted the urgent need for systematic improvements. An Action Plan was developed, which included evidence-based protocols and a detailed process map, to address these deficiencies.

SUMMARY

Challenge

- Difficulty in recognizing and managing severe sepsis and septic shock
- Persistent treatment delays and inadequate documentation

Impact

- Low sepsis bundle compliance scores
- Adverse effects on patient care and regulatory adherence

Solution

- Launch of a structured quality improvement initiative

Goals of the Initiative

- Optimize sepsis care outcomes
- Enhance adherence to clinical guidelines
- Improve documentation practices

METHODOLOGIES

Define: Established sepsis bundle compliance rates and identified improvement areas through daily audits.

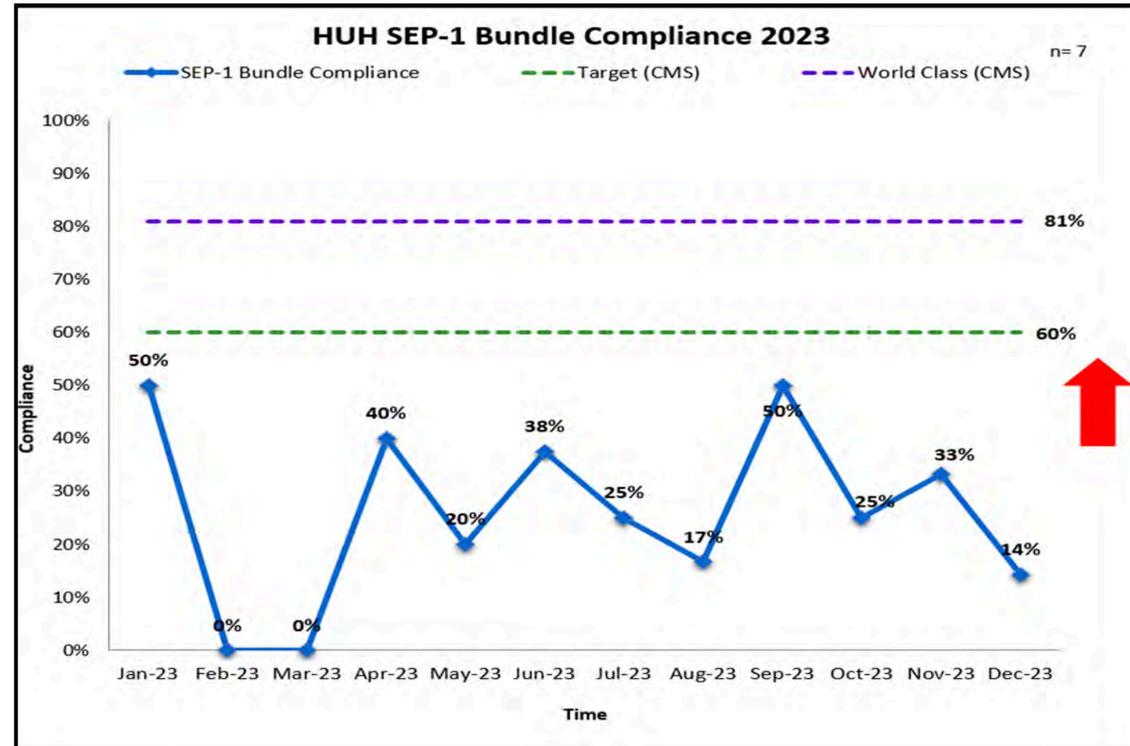
Measure: Followed CMS guidelines for timely administration of antibiotics, lactate measurement, fluid resuscitation, blood cultures, and vasopressors.

Analyze: Evaluated clinical practices to identify gaps in adherence to guidelines.

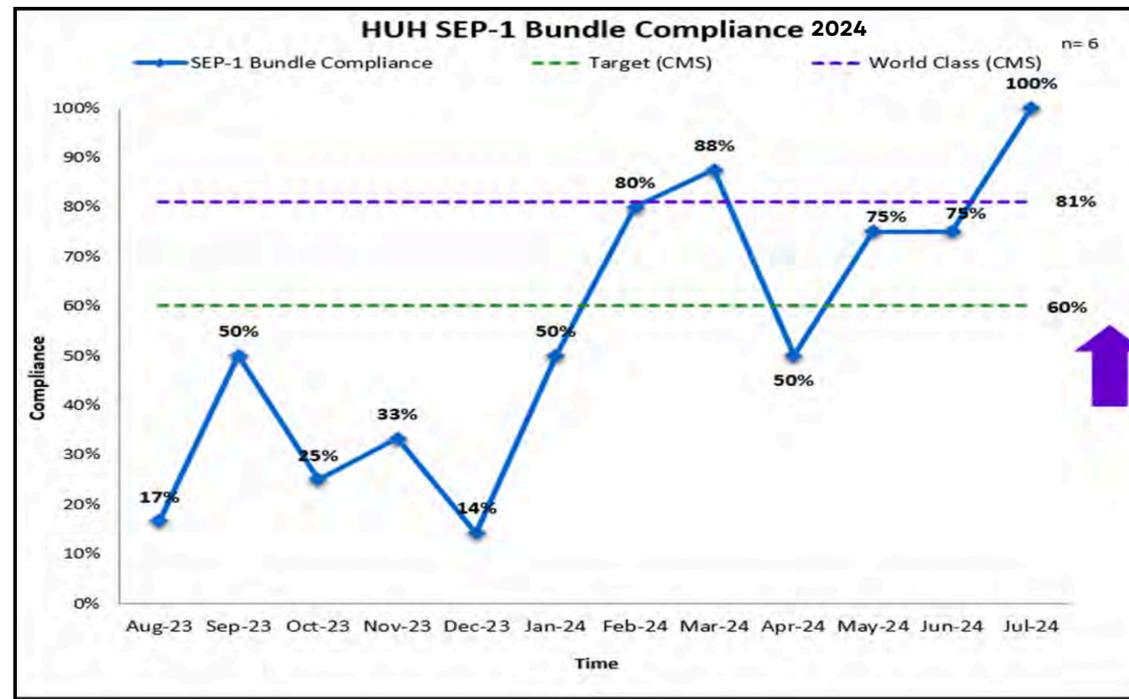
Improve: Developed resources, including process maps, tracking tools, and educational videos.

Control: Implemented regular audits and updated training programs to ensure ongoing compliance.

BEFORE



AFTER



RESULTS

Initial Compliance (December 2023):

- Only 14% of patients with severe sepsis and septic shock received all sepsis bundle elements within the recommended timeframe.

Project Launch:

- Initiated in January 2024 to improve compliance with sepsis guidelines.

Compliance Improvements:

- January 2024: Compliance increased to 50%.
- February 2024: Further improvement to 80%.
- March 2024: Reached 88% compliance.
- **Achievement (July 2024):** Attained 100% compliance, the highest level of adherence to sepsis guidelines.

Key Factors for Success:

- Multidisciplinary teamwork.
- Clear process mapping.
- Regular audits.
- Ongoing staff education.

Significance:

- Demonstrates the effectiveness of strategic initiatives in enhancing sepsis bundle compliance.

SEPTIC SHOCK INITIAL HYPOTENSION WITH CRYSTALLOID FLUIDS WITHIN 3H COMPLIANCE

Jan-24 Feb-24 Mar-24 Apr-24
May-24 Jun-24 Jul-24



SEVERE SEPSIS WITH REPEAT LACTATE WITHIN SIX HOURS COMPLIANCE

Jan-24 Feb-24 Mar-24 Apr-24
May-24 Jun-24 Jul-24



CONCLUSION

By achieving 100% compliance in July 2024, this project underscores the essential role of multidisciplinary teamwork, clear process mapping, regular audits, and ongoing staff education in enhancing sepsis bundle compliance. This remarkable achievement reflects a significant improvement in adherence to sepsis protocols and highlights the effectiveness of targeted interventions. These efforts have led to notable improvements in data accuracy, patient care outcomes, and positive financial outcomes for the hospital. Sustaining this high level of compliance will be crucial for continuing to enhance the quality of care for patients with severe sepsis and septic shock.

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Successful Reduction in Gastroenterology Endoscopy Suite Cancellation Rate



Sneha Adidam; Lynette Elliott; Michelle Dempsey-Evans; Robert Linton; Terrence Fullum;
Shelly McDonald-Pinkett; Quinn Capers; and Farshad Aduli





Successful Reduction in Gastroenterology Endoscopy Suite Cancellation Rate

Sneha Adidam 1, Lynette Elliott 3, Michelle Dempsey-Evans 3, Robert Linton 2, Terrence Fullum 4, Shelly McDonald-Pinkett 2, Quinn Capers 2, Farshad Aduli 1

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2- Department of Internal Medicine, Howard University Hospital, Washington DC

3- Department of Nursing, Howard University Hospital, Washington DC

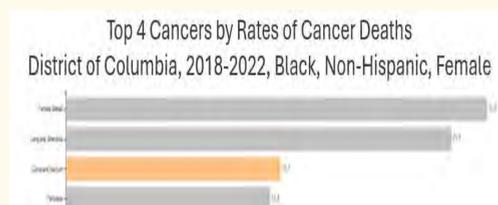
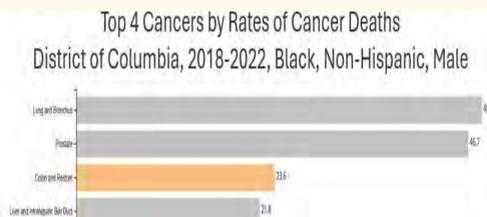
4- Department of Surgery, Howard University Hospital, Washington DC



INTRODUCTION

In Washington DC, colorectal cancer (CRC) incidence is higher than the national average particularly in black men (53.9 per 100,000 men). From 2018-2022, CRC death rate amongst black males in Washington DC was at 23.6 compared to the rest of the United States 15.2 (per 100,000 men). Among black female, the CRC death rate was 16.2.

There is a higher no-show rate in hospitals serving a larger underserved population which also has significant cost implications. [1] [3]



OBJECTIVE

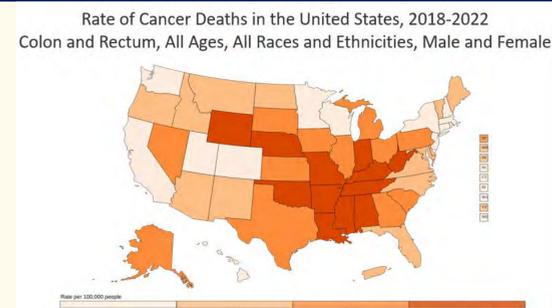
The aim of this study is to decrease cancellation rates for outpatient endoscopy by improving communication with patients.

METHODS

- We performed a retrospective observational cohort study of patients scheduled for outpatient endoscopy at Howard University Hospital.
- The authors reviewed the number of scheduled patients between 2021 to 2022 who did not complete endoscopy appointments.
- These numbers were compared to 2023 until June 30th, 2024, after the following intervention. We partnered with nursing staff to increase from one to three layers of communication.
- Firstly, education and scheduling on the day of the initial appointment, secondly, reminder call from nursing office regarding bowel preparation/pre-endoscopy preparation and thirdly, patients with severe comorbidities were called for health maintenance and medication review.

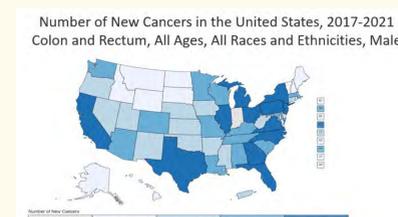
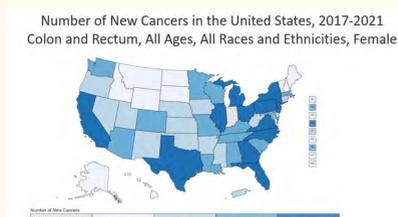
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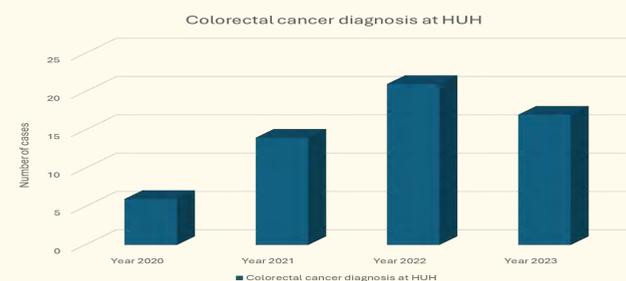
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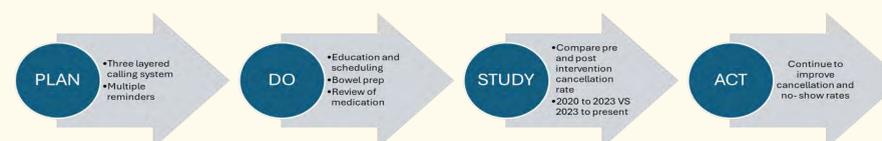


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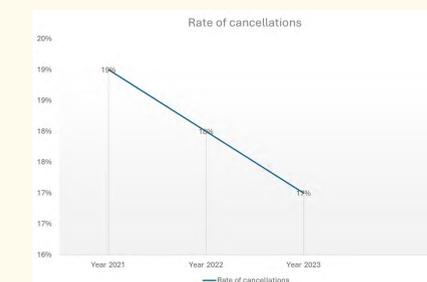


PDSA CYCLE



RESULTS

The endoscopy unit performs an annual average of 4000 endoscopic procedures. The rate of cancellation was 19% in 2021 and 18% in 2022. After our intervention which started in 2023, there was a reduction to 17% which has continued in 2024. The reasons for the cancellations were: no transport, physician cancellations, and no-shows without reasons. Amongst these reasons, no-show was the most common.



CONCLUSION

This study suggests that there is a significant cancellation rate in the outpatient endoscopy procedures. With the increased communication, there has been a slow and steady reduction in overall cancellations, including no-shows. We aim to continue this downward trend and reduction of no-shows.

Although the underlying reasons for no-shows have been indistinguishable, we believe further outreach and education can mitigate these ongoing issues.

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Reducing Postoperative Respiratory Failure in High-Risk Surgical Patients



THE GEORGE WASHINGTON
UNIVERSITY **HOSPITAL**

Alexandra Walker, DHSc, PA-C; Joseph Verde, RRT; Jodi Yaculak, RRT; Keith Mortman, MD; Ulises Torres, MD; Lillian Armstrong, RN; Meedie Bardonille, RN; Caitlin Litchfield, RN; Nicholas Caylor, DPT



Reducing Postoperative Respiratory Failure in High-Risk Surgical Patients

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Background

Postoperative respiratory failure (PRF) has been identified as a priority patient safety indicator (PSI), deemed 11 by the Agency for Healthcare Research and Quality. PRF is associated with a 25-40% in-hospital mortality rate.¹⁻³ An interdisciplinary evidence-based strategy was developed to reduce PRF using plan-do-study-act (PDSA) methodology.

Methods

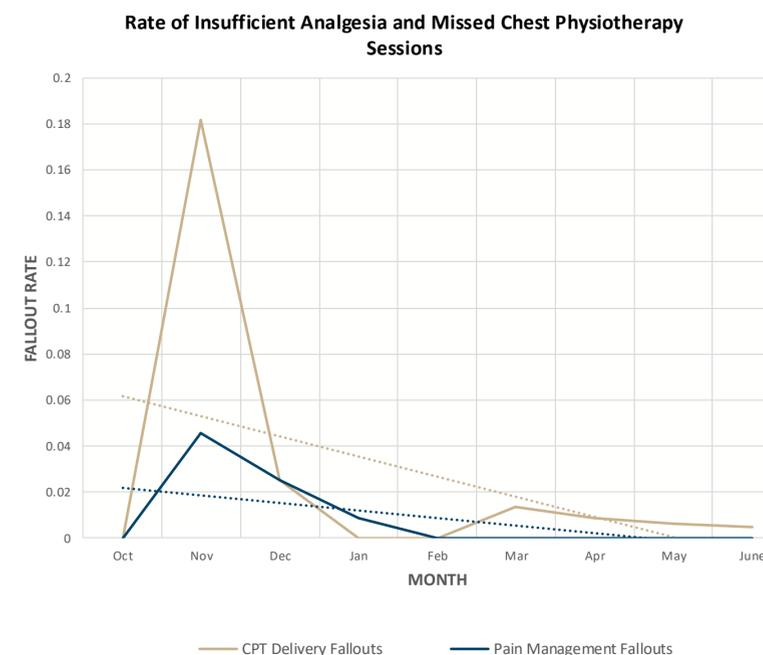
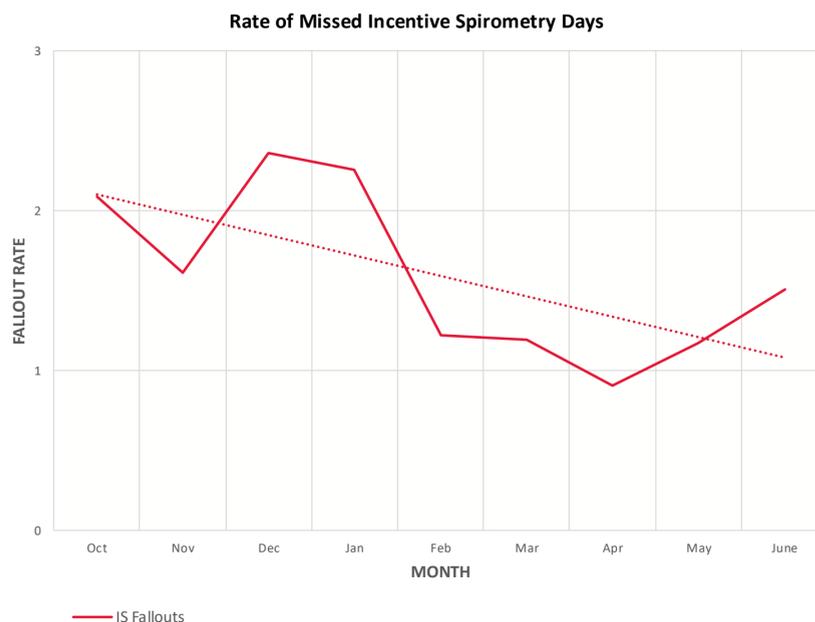
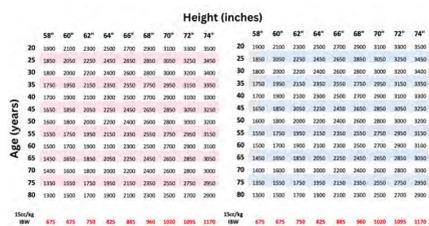
A literature review informed systematic chart reviews of PRF events between December 2021 and June 2023. A multidisciplinary committee determined 73% of past PSI 11 cases may have been prevented and attributed 65% to postoperative pneumonia.

A respiratory therapy-driven clinical pathway was designed to target high-risk surgical patients defined by surgical site (intraabdominal, intrathoracic, vascular) and low incentive spirometry (IS) volumes. The pilot unit was selected based on historical geographic burden. Nurses, providers, and respiratory therapists participated in education sessions with solicitation of feedback regarding anticipated program barriers and facilitators.

A phased rollout was initiated by surgical service. Enrolled patients were evaluated daily by a respiratory therapist with out-of-scope concerns (e.g., analgesia, cognition, mobility) relayed to the appropriate team members. To strengthen mobility-related opportunities, nursing education led by physical and occupational therapists was conducted.

9-Month Pilot Performance

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Cumulative Enrollment	11	24	35	70	102	181	310	436	501
Monthly Enrollment	11	13	11	35	32	79	129	126	65
CPT Activation	5	22	40	115	33	73	116	156	214
Clinical Events	39	47	66	239	174	285	336	412	350
Upgrade Higher LOC	0	0	0	1	0	0	0	1	0
IS Fallouts	23	21	26	79	39	94	117	148	98
RT Assessment Order Fallouts	0	0	0	1	1	0	0	7	9
CPT Order Fallouts	13	15	21	0	0	0	0	0	1
CPT Delivery Fallouts	0	4	1	0	0	1	1	1	1
Pain Management Fallouts	0	1	1	1	0	0	0	0	0
Mobility Fallouts	0	2	1	31	15	39	25	44	35
Ambulation Fallouts			2	55	38	29	46	58	58



Results

During the first 9 months of pilot implementation, there were 501 pilot-eligible surgical patients. Only two patients required escalation to a higher level of care and zero patients developed PRF. Daily documentation of IS was monitored for all eligible patients, with an initial fallout rate of 2.1 days of missing documentation per patient. Using a line of best-fit, the IS fallout rate demonstrated an average decline of 0.11 days per patient per month. Only 0.2% of chest expansion treatments were missed in sum, compared with a pre-pilot average of greater than 50% missed treatment sessions in PRF patients.

Conclusion

A respiratory therapy-driven clinical pathway supported by interprofessional collaboration meaningfully increased treatment delivery and reduced PRF.

References

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2. Thompson SL, Lisco SJ. Postoperative Respiratory Failure. *International anesthesiology clinics*. 2018;56(1):147-164. doi:10.1097/AIA.000000000000173
3. Canet J, Gallart L. Postoperative respiratory failure: Pathogenesis, prediction, and prevention. *Curr Opin Crit Care*. 2014;20(1):56-62. doi:10.1097/MCC.000000000000045

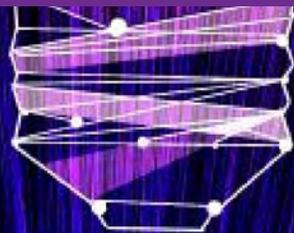


Limiting Organizational Diversion Risk by Reducing Controlled Substance Discrepancy Resolution Time



MedStar Georgetown
University Hospital

Jordan Hughes, PharmD, MS, BCPS



Limiting Organizational Diversion Risk by Reducing Controlled Substance Discrepancy Resolution Time

Background

- Large academic medical centers have large controlled substance (CS) transaction volumes, and many clinical associates involved with handling controlled medications
- The number of associates and high transaction volume of these causes inherent risk of diversion throughout the medication use process.
- Monitoring CS transactions is paramount in the deterrence of CS abuse, theft, and loss.
- Controlled substance diversion impacts patient care, healthcare workers, organizations, and the public.¹
- A system-wide goal of resolving >95% of CS discrepancies in less than 24-hours was established to reduce organizational risk and protect patients, the public, and our associates.
- The system-wide goal created opportunity for a multidisciplinary procedure to foster collaboration
- Pharmacy, Nursing, and Physician groups were the key groups involved

Objectives

1. Build a replicable CS monitoring system to reduce discrepancy resolution time
2. Reduce all types of risk associated with drug diversion in the institutional setting

Methods

- Four key steps were identified within in the discrepancy resolution process to improve resolution rates
 1. Unresolved discrepancies are resolved by the team creating the discrepancy within 24-hours
 2. The Pharmacy Team reviews unresolved discrepancies each morning and evening shift
 3. Notification of identified unresolved discrepancies is provided to the team that created the discrepancy and is documented
 4. Patient Safety Events (PSEs) are entered for all unresolved discrepancies after 24-hours
- A Root Cause Analysis (RCA) was conducted for all unresolved discrepancies to identify opportunities in the process
- The RCA identified key areas of opportunity for process refinement



- A final meeting with the multidisciplinary team was held, focusing on refinement of the process and continued partnership between stakeholders

Data Collection

- Data was collected through two primary sources:
 1. Automated dispensing cabinets (ADC) unresolved discrepancy reports
 2. Electronic medical record (EMR) review

Results

- 42% of unresolved discrepancies occurred on weekends.
- Multiple units had more than one unresolved discrepancy, but no unit specific trends were identified
- Volume of CS discrepancies tracked the usage of agents, with no clear medication as an outlier
- The system goal of <5% was met in May 2024, with a result of 1.7% and success has been sustained through October 2024

Conclusions

- 24/7/365 monitoring is essential for a successful CS monitoring program
- Collaboration, data collection, and continuous process improvement were keys to success

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1. Fan, M., & Tscheng, D. (2019, June 12). *Diversion of controlled drugs in hospitals: A scoping review*. Journal of Hospital Medicine. <https://shmpublications.onlinelibrary.wiley.com/doi/full/10.12788/jhm.3228>

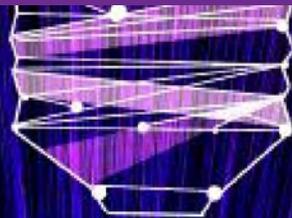


No Clots Allowed: Leveraging Collaboration to Prevent Venous Thromboembolism (VTE) in Hospitalized Patients



MedStar Georgetown
University Hospital

Abigail Butts, MS, RN, CCNS, CCRN; Mary Herold, EM-CQSL, BSN, RN, CPPS, PROSCI; and Lauren Lubrano, MD



No Clots Allowed: Leveraging Collaboration to Prevent Venous Thromboembolism (VTE) in Hospitalized Patients

Abigail Butts MS, RN, CCNS, CCRN, Mary Herold EM-CQSL, BSN, RN, CPPS, PROSCI™, Lauren Lubrano MD

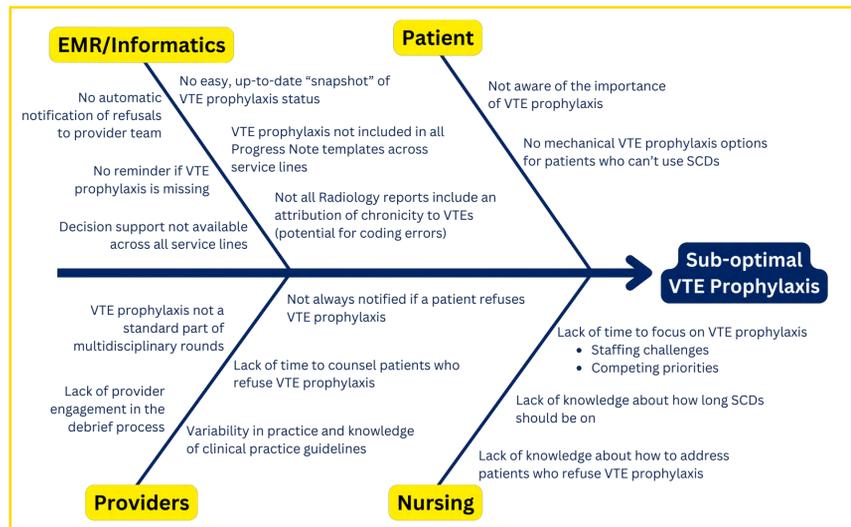
The Problem

Hospital-acquired VTE is a leading cause of preventable death and has significant impact on quality across hospital systems related to both patient care and financial/reputational programs (Center for Disease Control and Prevention). Compared to other academic medical centers, in addition to other entities within MedStar Health, MedStar Georgetown University Hospital had a significant opportunity to reduce hospital-acquired VTE events. Our team was challenged to **reduce the hospital-acquired comprehensive VTE rate by 30%**.



Measurement

- ▶ A fishbone diagram was created to identify causes of the problem.
- ▶ A control chart was used to visualize the effect of our project interventions over time.



Analysis

- ▶ Our team utilized the MedStar Health SMART Methodology (Scope, Measure, Analyze, Rethink, Track) as our continuous improvement framework.
- ▶ The comprehensive hospital-acquired VTE rate was tracked using data from Vizient™.

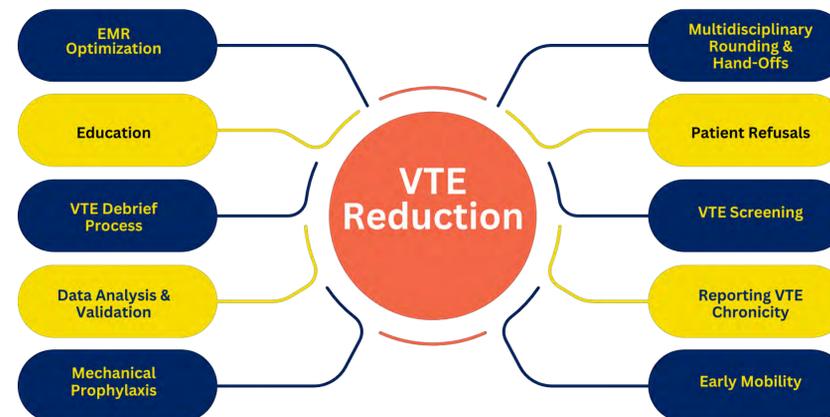


The **MedStar Health SMART Methodology** combines the most effective strategies into one system built for our unique needs as a healthcare high reliability organization (HRO).

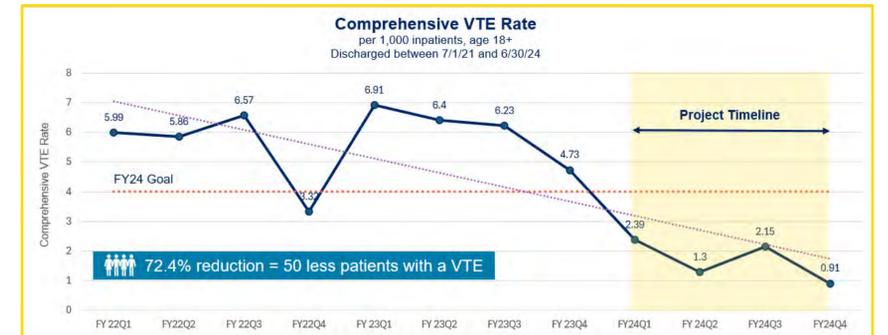
- SCOPE** the opportunity and define the problem.
- MEASURE** to understand the current state of the problem through data.
- ANALYZE** data and determine root causes of the problem.
- RETHINK** the problem and implement solutions.
- TRACK** improvement and ensure sustainability.

Implementation

- ▶ A multidisciplinary project team created action items targeting 10 different areas of focus.
- ▶ VTE reduction was endorsed as the FY2024 President's Goal, signaling it as a high priority with executive support.



Results/Discussion



By targeting VTE reduction from all angles, MedStar Georgetown achieved a **72.4% reduction** in our comprehensive VTE rate. The utilization of SMART methodology and project management principles were critical to our success.

Immense value was gained by maximizing the collaborative efforts of our multidisciplinary project team. This, along with strong executive support and prioritization, helped us to exceed our goal.

References

Center for Disease Control and Prevention. Venous Thromboembolism (Blood Clots). <https://cdc.gov/blood-clots>

Clapham, R. E., Marrinan, E., & Roberts, L. N. (2023). VTE prevention in medical inpatients-current approach and controversies. *Thrombosis Update*, 100151.

Nicholson M, Chan N, Bhagirath V, Ginsberg J. Prevention of Venous Thromboembolism in 2020 and Beyond. *Journal of Clinical Medicine*. 2020; 9(8):2467. <https://doi.org/10.3390/jcm9082467>

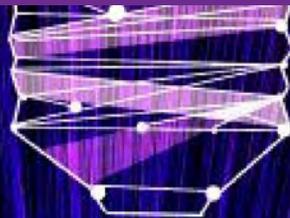


Quality Initiative for Safe Bivalirudin Administration Through Nursing Protocols



MedStar Washington
Hospital Center

Phalan L. Bolden MBA, MSN, FNP-C



Abstract

This quality initiative investigates the safety of Bivalirudin administration in critical care through nurse-driven protocols via mixed methods by evaluating for specific patient populations and implementing supportive systems and training.

Background

Bivalirudin, a potent anticoagulant used in critical care settings, demands precision in administration to mitigate risks.

Methods

The initiative will adopt a Pre and Post Implementation study (Mixed method). Critical care nurses will undergo comprehensive education and training on Bivalirudin pharmacology, dosage calculations, and safety protocols to include documented independent double checks at pump titration. Nurse-driven protocols will be introduced and evaluated in critical care units. Data will be collected on adverse events, dosage accuracy, and patient outcomes, utilizing electronic health records and incident reporting systems. Statistical methods will be employed for quantitative analysis, while qualitative analysis will identify factors influencing feasibility and practicality.

Anticipated Results

- Time to Bivalirudin steady state-defined by two consecutive aPTTs with the target range and the percentage of aPTT values.
- Evaluation of the incidence of adverse events related to Bivalirudin under nurse-driven protocols.
- Assessment of the effectiveness of nurse-driven protocols in achieving therapeutic goals.
- Identification of barriers and facilitators to the feasibility of nurse-driven protocols.

Current State

Bivalirudin protocol is in the Clinical Content Knowledge management (CCKM) queue for Computer prescriber order entry (CPOE) development. Locally there have been ongoing discussions on who should own the protocol (MD/Pharmacy/RN driven). There is a request to align with other anticoagulation nurse-driven protocols, all of which require manual calculation (M-page decision support) and manual pump programming except initiation. Bivalirudin protocol was approved for use by the Pharmacy & Therapeutics Committee for Heparin Induced Thrombocytopenia (HIT)/Extracorporeal membrane oxygenation (ECMO). Mostly utilized for ECMO locally, Bivalirudin is a low volume/high risk drug for administration. Increments of titration are in decimal points out to the hundredth and thousandth.

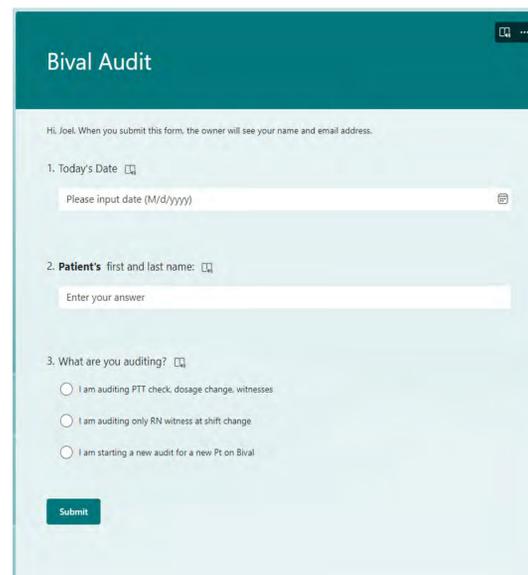
Future State

Phase 1 - ECMO Patients: Safe Rollout and Shared Accountability

Phase 2 - HIT Population in the ICU. This phased approach aims to ensure the safe and effective utilization of Bivalirudin with ECMO patients and subsequently with HIT patients in the ICU.

The implementation of safeguards is crucial for ensuring the safe and efficient administration of Bivalirudin. The additional hard stops, reinforced double-checks, elimination of workarounds, and collaboration with safety teams will collectively contribute to a robust and secure medication administration process. Regular monitoring and feedback loops should be established to continuously assess the effectiveness of these measures and make further adjustments as needed.

Auditing tool



Bival Audit

Hi, Joel. When you submit this form, the owner will see your name and email address.

1. Today's Date

Please input date (M/d/yyyy)

2. Patient's first and last name:

Enter your answer

3. What are you auditing?

I am auditing PTT check, dosage change, witnesses

I am auditing only RN witness at shift change

I am starting a new audit for a new Pt on Bival



3. What are you auditing?

I am auditing PTT check, dosage change, witnesses

I am auditing only RN witness at shift change

I am starting a new audit for a new Pt on Bival

4. Was the last PTT drawn on time?

Yes

No

5. Did the PTT result require a dosage change?

Yes

No

6. Was the protocol followed as ordered?

Yes

No

Limitations or next steps

- Safeguards/Accountability Audits
- Current literature lacks substantial evidence on the safety and efficacy of nurse-driven protocols for low volume, high risk administration of intravenous Bivalirudin
- Technological limitations exist, which bypass the ability to smart pump program medication titrations against an order with nurse driven protocols thus relying on independent double checks for accurate calculation and programming

Conclusion

This quality initiative is poised to contribute essential evidence to the literature, addressing the current gap in knowledge surrounding Bivalirudin administration by nurses. Ultimately, the initiative aims to enhance patient safety and promote the responsible utilization of Bivalirudin through nurse-driven protocols.

References

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Acknowledgements

Thanks to the Bivalirudin multidisciplinary team for their dedication to the success of the Bivalirudin Nurse Driven protocol. Medstar 2NW ICU Nursing leaders Nursing staff, Educators, Pharmacy, Physicians, Advanced Practice Providers, Nursing Informatics, Medical informatics, Clinical Specialists and Quality.



Enhancing Patient Safety: Optimizing Alarms in the Emergency Department to Combat Alarm Fatigue



MedStar Washington
Hospital Center

Daniell Kempton, MSN, APRN, ACCNS-AG, CCRN-CSC & Julia Fisher MSN, RN, CEN, CNL, NPD-BC



Abstract

Emergency department (ED) nurses often face high levels of distraction and alarm fatigue due to the numerous devices emitting alerts in this fast-paced environment. Utilizing a Plan-Do-Study-Act (PDSA) approach, the baseline alarm programming was reviewed and then compared to the recently updated Intensive Care Unit (ICU) and Intermediate Care Unit (IMC) alarms. Three types of alarms (technical, arrhythmia and parameter) were reviewed and then adjusted. Three months of pre-data and post-data were actively collected and reviewed. Overall, the pre-data total alarms were 130,213 and then decreased to 73,656 during the post-data, illustrating a 43.43% decrease. These updates ensure that nurses can swiftly and appropriately respond to critical alarms leading to improved patient outcomes.

Introduction

Alarm fatigue, a well-studied phenomenon across nursing disciplines, poses significant risks due to the overwhelming noise from both relevant and irrelevant alarms. This noise overload can result in delayed or missed responses, compromising patient safety. Modifying alarms to be actionable and clinically relevant is crucial for reducing alarm fatigue, enabling nurses to swiftly respond to critical patient needs and ultimately minimize adverse events.

Methods

All baseline alarm settings were pulled from the ED bedside monitors and then compared to the ICU and IMC settings. Optimization of the alarms included adjusting high or low parameter settings, alarm volume, or alarm alert.

Pre-optimization data was collected for three months and then analyzed and compared to the baseline alarm settings. Based on the pre-data the optimization proposal included six arrhythmia alarms, 11 parameter alarms, three technical alarms, and an overall alarm volume adjustment. The proposed changes were presented to ED leadership (providers and nursing), bedside staff, and the Alarms Committee. After input from the key stakeholders, the proposed changes optimized six arrhythmia alarms, 11 parameter alarms, one technical alarm, and one alarm volume (Figure 1). The biomechanical engineers collaborated to adjust the alarms. Post-optimization data was then collected for three months after the adjustment.

Alarm Name	ED Setting	ICU/IMC setting	New Setting
ECG Low Alarm Limit	60	55/50	55
NIBP Diastolic Alarm	On	Off	Off
NIBP SBP High Alarm Limit	150	180	180
Art1 Systolic High Alarm Limit	150	180	180
Art1 Diastolic Alarm	On	Off	Off
ICP1 Mean High Alarm Limit	20	15	15
RR High Alarm Limit	30	45	35
RR High & Low Alarm		Informational	Informational
RR (CO2) High Alarm Limit	30	45	35
PEEPe (spirometry) Alarm	On	Off	Off
Technical – Change Telemetry Battery	Medium	Informational	Informational
Afib	Low	Informational	Informational
Bigeminy	Low	Informational	Informational
Couplet	Low	Informational	Informational
Missing Beat	Low	Off	Off
Multifocal PVCs	Low	Informational	Off
Trigeminy	Low	Informational	Informational
Alarm Volume for Low Priority Alarms	7	6	6

Figure 1

Results

There was a reduction of 32.5% in month one, 45.18% in month two, and 54.43% in month three when compared to correlating months (Figure 2). The largest decrease was in the parameter alarms (Figure 3); more of these alarms were adjusted comparatively.

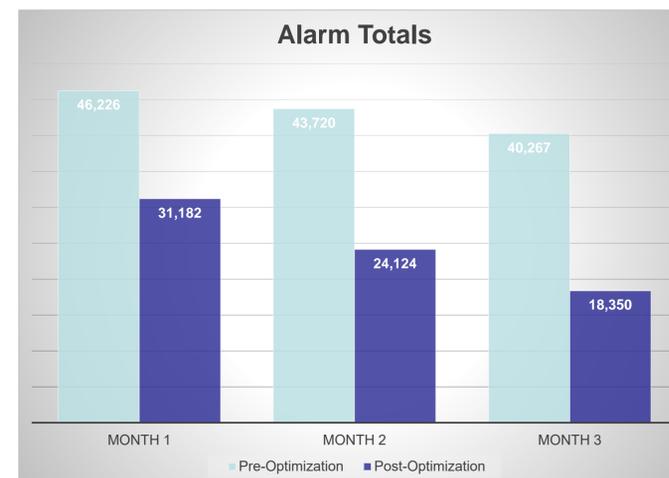


Figure 2

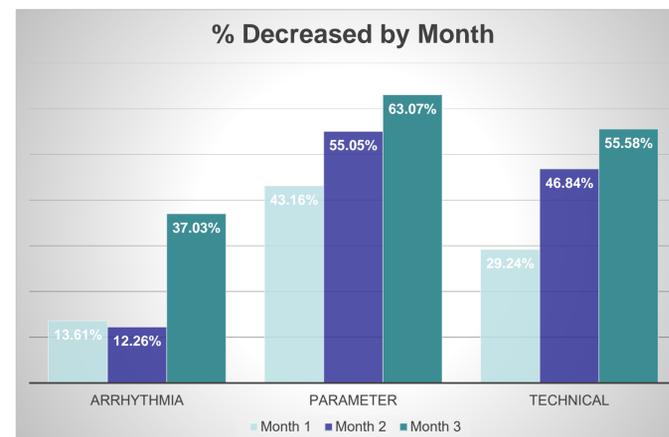


Figure 3

Limitations or next steps

Opportunities were found to standardize parameters in all modes and revisit arrhythmia-based alarms. One challenge faced was having all key stakeholders endorse the new alarm programming. Many proposed arrhythmia changes were not endorsed by the provider teams to ensure that diagnoses were not missed. Further study can consider the impact of decreasing alarms on nursing sensitive indicator outcomes, patient experience, and associate satisfaction.

Conclusion

By optimizing alarm parameters, EDs can significantly decrease non-actionable alerts, mitigating alarm fatigue that compromises nurse well-being and patient safety.

As alarm fatigue is a pervasive issue, optimizing alarms can serve as a model to enhance the nursing practice environment, prioritize safety, and elevate the quality of care.

References

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Acknowledgements

Thank you to the MWHC Alarms Committee, ED leaders, ED staff, and the Biomedical engineering team for all their assistance in making this project possible.

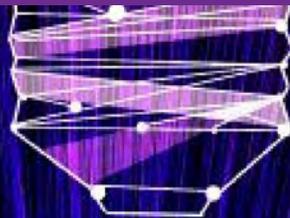


Achieving a CLABSI-Free NICU: Implementing and Sustaining Best Practices for Central Line Management in a Level IIIB Neonatal Intensive Care Unit



MedStar Washington
Hospital Center

Georgina Crookes, MS, RNC-NICU





Background

Central line-associated bloodstream infections (CLABSI) are a major cause of morbidity and mortality in Neonatal Intensive Care Units (NICUs), particularly affecting preterm and critically ill neonates. These infants are highly susceptible to infections due to their immature immune systems, prolonged hospital stays, and frequent need for central venous access for nutrition, medications, and monitoring. CLABSIs not only increase the length of hospitalization and healthcare costs but also contribute to adverse long-term outcomes in this vulnerable population. Maintaining a CLABSI-free environment is crucial for improving outcomes in this high-risk population.

Goal

- Zero central line infections

Methods

- Our CLABSI rate data is entered into the National Healthcare Safety Network (NHSN) and then reported back through Tableau. Tableau generates monthly reports based on two key variables: the number of central line days and the number of observed CLABSI infections in our NICU. Central line days refer to the total number of days that central lines are in use for patients each month, while observed infections record any occurrences of CLABSI.
- Tableau reports NHSN data, which includes the predicted Standardized Infection Ratio (SIR) using national aggregate data from similar NICUs. The SIR compares the observed infection rates with the predicted rates, helping us assess our performance relative to national benchmarks. This ongoing analysis enables us to track trends, evaluate the effectiveness of our interventions, and adjust our infection prevention practices as needed.
- NHSN uses a negative binomial regression model to estimate the incidence from a summarized population for CLABSIs

Interventions

- Scrubbing in using CHG soap and meticulous hand hygiene throughout the shift
- Daily IMOC rounds with the attendings where prioritization of early line removal is emphasized on our Green Safety Checklist
- A team of specialized and trained PICC nurses is responsible for the insertion and removal of our PICC lines, ensuring adherence to best practices and aseptic techniques.
- Adherence to our Central Line Insertion, Maintenance and Removal in the Neonatal Intensive Care Unit (NICU) Policy which includes:
 - Strict dwell times: 7 days for Umbilical Venous Catheters (UVC)/ Umbilical Arterial Catheters (UAC). 21 days for PICC (Peripherally Inserted Central Catheter) Lines
 - Aseptic technique when priming IV Fluids
 - Use of 3 alcohol swabs x 15 seconds every time the line is accessed
 - No blood draws allowed from UVCs or PICCs
 - Dressing changes PRN only
 - 2 RN Central line dressing changes
- Change of fluid q24 hours
- Weekly bed changes to prevent fungal infections
- Discontinuation of humidity prior to PICC insertion
- Annual mandatory central line education

Results

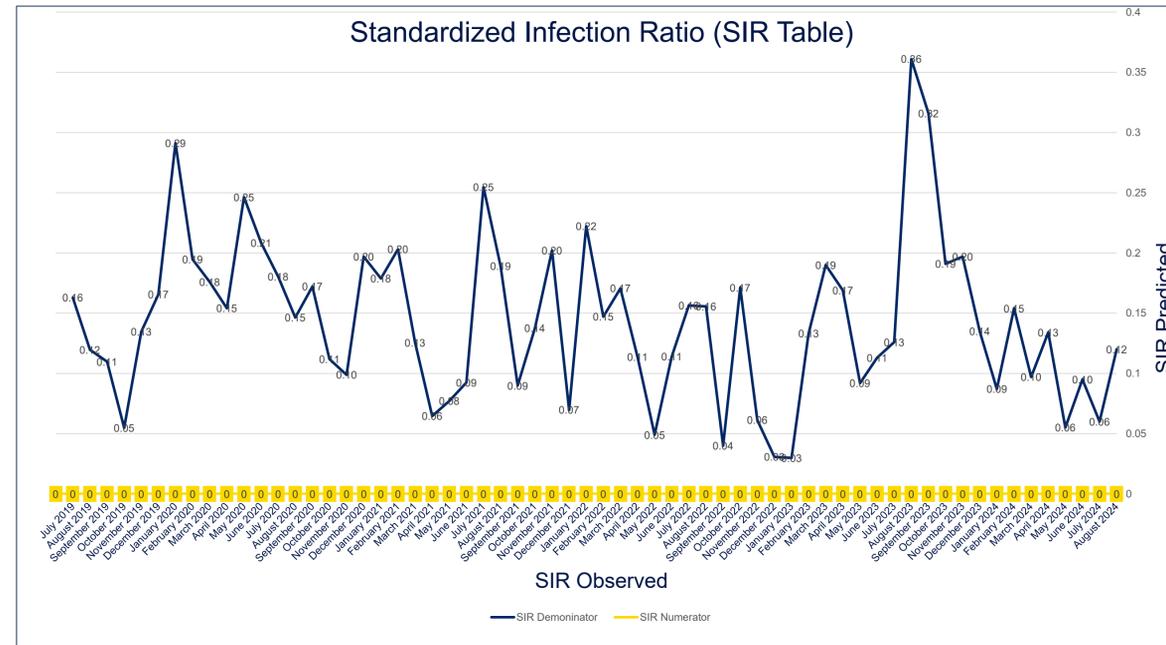


Figure 1 This figure shows the Standardized Infection Ratio which is identifying the observed number of infections against the predicted number of infections. Predicted SIR rates under 1 means the NICU has fewer reported CLABSIS than the national average

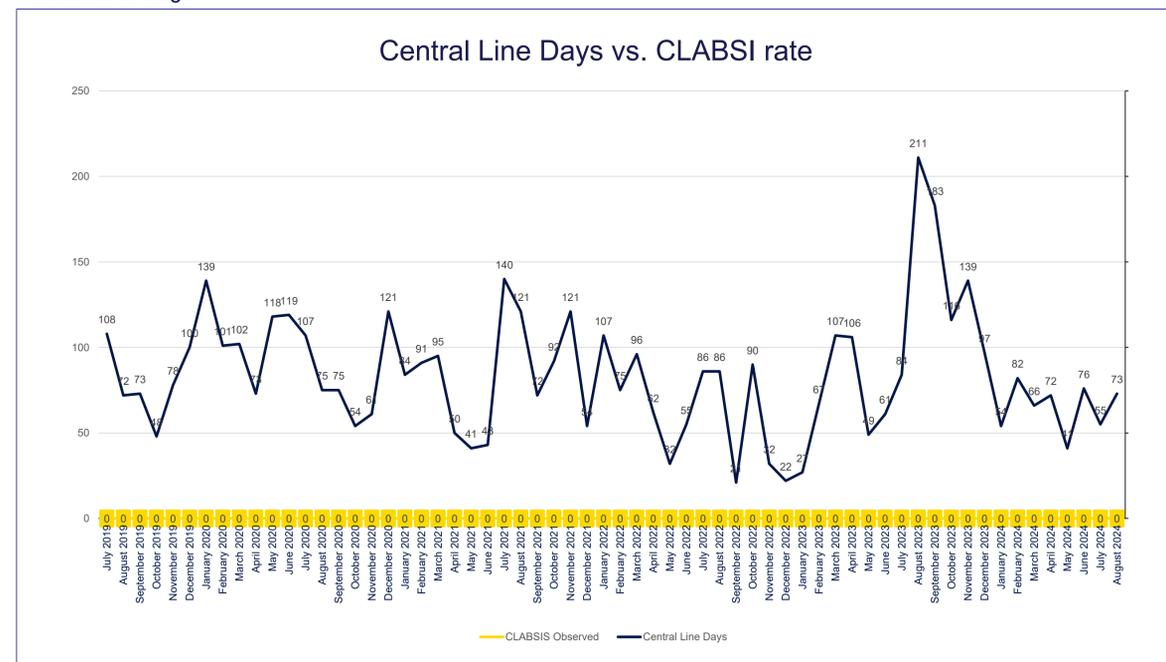


Figure 2 This figure presents a total of 5,158 central line days alongside the number of CLABSIs observed, demonstrating no infections despite the extensive use of central lines. The results are captured in Tableau, and the SIR prediction numbers are based on a risk-adjusted methodology using the national aggregate of other NICUs with similar populations

Limitations

- Challenges in obtaining PICC lines for patients with poor peripheral venous access, potentially leading to extended use of central lines beyond the recommended dwell time.
- High patient acuity combined with limited staffing may contribute to rushed maintenance practices
- Limited experience among junior staff members, potentially impacting adherence to proper central line maintenance protocols

Next Steps

- Explore alternative vascular access techniques for patients with challenging venous access to facilitate timely and appropriate central line placement like using ultrasound guidance
- Evaluate options for enhancing staffing support during high-acuity periods to ensure adherence to central line protocols
- Strengthen training programs for junior staff, emphasizing hands-on education in central line insertion and maintenance

Conclusion

Through the implementation of standardized interventions and stringent infection control practices, our NICU has successfully remained CLABSI-free for the past five years, despite recording 5,158 central line days. The risk-adjusted data, benchmarked against similar NICUs nationally, reflects the sustained impact of our proactive measures, including strict adherence to aseptic techniques, defined dwell time guidelines, daily evaluations of line necessity, and comprehensive staff training. This achievement highlights the effectiveness of our infection prevention strategies and underscores the dedication and diligence of our team in providing high-quality neonatal care. These results demonstrate the success of our approach and offer a replicable model for other NICUs striving to achieve similar outcomes.

References

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Acknowledgement

Thank you to our incredible NICU staff for your dedication in keeping our patients CLABSI-free for over five years. A special shoutout to the PICC team for your exceptional work and commitment to patient care. Your efforts make a profound difference every day.

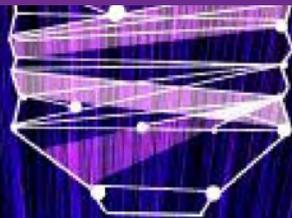


Sustaining Central Line Blood Stream Infection (CLABSI) Improvements: How to "Course Correct" While Sailing on Rough Waters



MedStar Washington
Hospital Center

Sally B. Gutierrez, MSN, RN, CPHQ





Introduction

MWHC’s CLABSI Reduction Team set sail towards high reliability, fueled with evidence- based momentum and equipped for success. Their improvement trajectory was heading upward, until waters turned rough and CLABSIs began to rise. Temporarily disrupting their gains, the competent commanders at the ship’s helm and their experienced crews persevered to redirect their strategy.

Captains at the Ship’s Helm

Mohamed Y. Aboukhashan, MD
Victor M. Baez Martinez, MD
Sarah M Craft BSN, RN, CCRN
Sally B. Gutierrez, MSN, RN, CPHQ
Sierra M. Jones, BSN-RN
Kristina M. Poole, MS, RN, CMSRN

Multidisciplinary Crew

Infection Preventionists
Physicians
Advanced Practice Providers
Nursing Leaders
Unit-based CLABSI Champions
Quality and Safety

MWHC’s Nautical Map to Guide Sustainability



Prioritization:

- ✓ Senior leaders established CLABSI reduction a quality and safety priority, A CLABSI Summit included engaged leaders (locally and at system level), to promote collaboration, assess current state, and establish strategy for rising CLABSIs.



Standardization:

- ✓ An operator and observer attend every central line (CL) insertion, use algorithm and checklist to ensure line necessity, appropriateness (type, size, and site) and ensure adequate preparation.
- ✓ Use of standardized insertion and dressing supply kits
- ✓ CL dressings performed by two RNs
- ✓ Education on blood culture collection techniques



Problem solving:

- ✓ Multidisciplinary teams review every CLABSI aiming to identify OFIs and suggestions for shared learning.



Visual Management:

- ✓ Data transparency through unit-based quality and safety boards that celebrate incremental successes and inform leaders and staff of changing conditions
- ✓ “Best Dressings,” & “What’s My Line” education



Accountability:

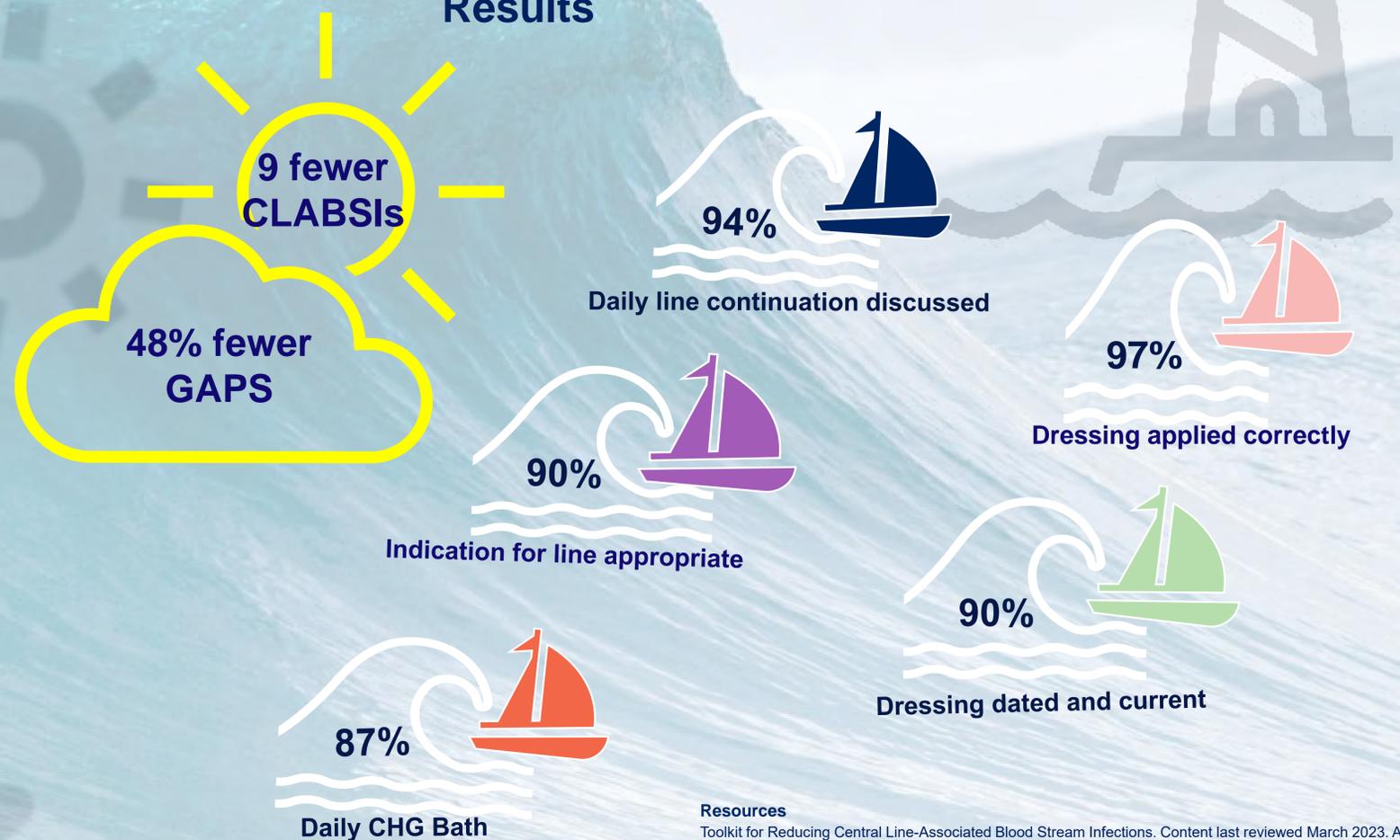
- ✓ CLs discussed during interdisciplinary patient rounds
- ✓ Unit based champions regularly assess adherence to CL maintenance bundle



Escalation:

- ✓ Engage providers to enhance patient participation, reinforce provider accountability
- ✓ Monthly meetings to share updates
- ✓ Status reports to executive sponsor

Results



Resources

Toolkit for Reducing Central Line-Associated Blood Stream Infections. Content last reviewed March 2023. Agency for Healthcare Research and Quality, Rockville, MD. <https://www.ahrq.gov/hai/clabsi-tools/index.html>

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MedStar Health / MedStar Washington Hospital Center Integrated Clinical Practice Guideline Prevention of Central Venous Catheter Related Infection; June 2024.

MedStar Washington Hospital Center Central Line Blood Stream Infection (CLABSI) Quality Assessment and Performance Improvement Program; June 2024.

Conclusions

The journey to high reliability is not always smooth sailing. Teams must continuously reassess their strategy to navigate back on course, accelerate towards sustainability, and celebrate incremental successes.

Next Steps

- ✓ Monthly Prevalence Day -CLABSI champions on each unit will round on every central line to assess appropriateness and uphold the highest quality standards.
- ✓ Daily Management Tool that displays status of documenting bundle requirements

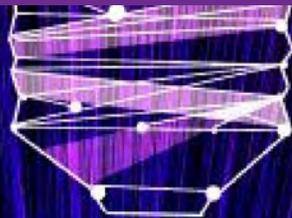


Improving Nurse Compliance with Severe Sepsis Screening: A Quality Improvement Initiative



MedStar Washington
Hospital Center

Naomi Peterson, DNP, ACNP-BC, CCRN & Kristina Poole, MS, RN, CMSRN



Background

Patients who develop sepsis on medical-surgical (M/S) units are identified later and have worse outcomes compared to those diagnosed in emergency and intensive care settings.¹ At MedStar Washington Hospital Center, M/S nurses complete the Quick Sequential Organ Failure Assessment (qSOFA) to identify sepsis alert patients with greater mortality risk,² triggering an accelerated sepsis response. Internal data revealed low rates of timely qSOFA completion. Poor qSOFA compliance and timeliness may delay identification and treatment for high-risk sepsis patients on M/S units.

Project Aims

A quality improvement (QI) pilot project was designed to:

- I. Improve nurses' understanding of the qSOFA tool, measured by a pre- and post-intervention knowledge test;
- II. Increase overall qSOFA completion, measured by pre- and post-intervention sepsis performance improvement data; and
- III. Increase percent of qSOFA completed within 30 minutes of sepsis alert, measured by pre- and post-intervention sepsis performance improvement data.

Methods

Design: pre-post interventional pilot project implemented over 12 weeks in Fall 2023

Setting and sample: medical intermediate care unit (MIMC) of a large teaching hospital, all MIMC staff nurses (n=44)

Interventions: multimodal education campaign including 10-minute e-learning module, unit visits, flyers and clinical references posted on unit, and badge buddies; weekly audit and feedback flyers with practice tip.

Sample Badge Buddy

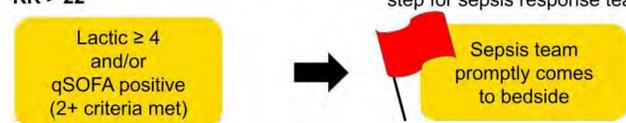
qSOFA for MWHC RNs

What is qSOFA?

- Tool to identify potentially septic patients at highest risk of dying
- Sepsis alert + positive qSOFA = highest mortality risk
- 3 criteria: GCS < 15, SBP < 100, RR > 22**

qSOFA in Sepsis Response

- Sepsis alert fires → lactic acid and qSOFA ordered
- Do qSOFA first**, before drawing lactic acid
- qSOFA result determines next step for sepsis response team



Goal for sepsis alert to qSOFA completion = < 30 minutes!

Results

Aim I: qSOFA knowledge test scores

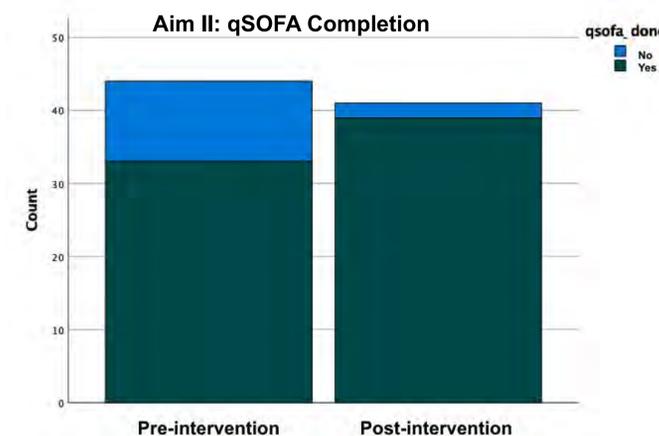
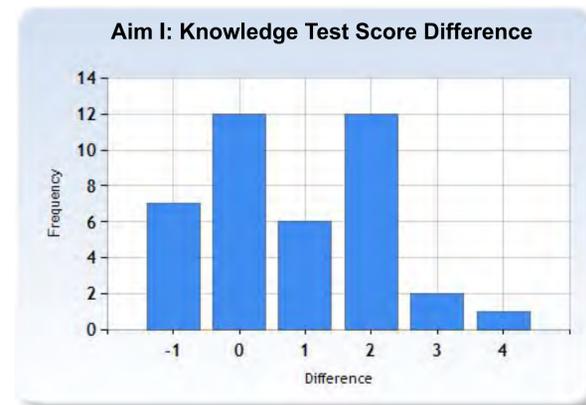
- Sum scores improved by mean 0.825 points out of seven (SD 1.3), Wilcoxon-Signed Rank z -3.5, **p<.001**
- Very high participation rate, 95% of nurses completed the voluntary training in four weeks

Aim II: qSOFA completion rate

- qSOFA completion increased from 75% to 95% (+20%) compared to baseline, $\chi^2(1, n=85) = 6.63$, **p=.01**

Aim III: qSOFA completion within 30 minutes of sepsis alert

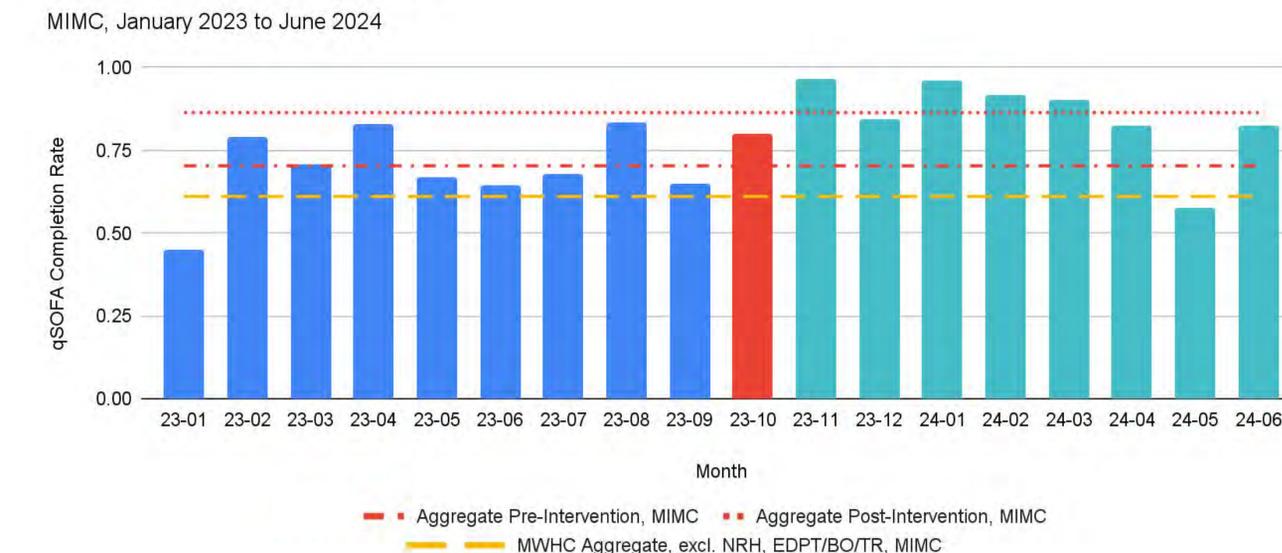
- $\chi^2(1, n=68) = 0.02$, p=.87, no significant effect found



Sustained Change

- MIMC aggregate qSOFA completion rate increased from 70% to 86% (+16%) for the eight months following the project with no ongoing interventions, $\chi^2(1, n=383) = 14.40$, **p<.001**
- During the same period, MWHC aggregate qSOFA completion remained at 65%

qSOFA Completion by Month



Conclusions

- Multimodal education combined with clinical audit and feedback was effective at increasing nurse compliance with qSOFA screening.
- Improved nurse compliance with qSOFA screening was sustained at 8 months without ongoing intervention.
- Additional approaches are needed to increase the rate of qSOFA completion within 30 minutes of sepsis alert.
- High rates of voluntary participation demonstrate the effectiveness of leadership support, familiar technologies, and proactive communication to engage nurses.

Limitations

- Baseline qSOFA performance varies widely between units, and implementation strategies should be tailored to unit workflow and needs accordingly.³
- The effects of qSOFA screening on patient outcomes at MWHC have not been measured.
- Elements of this pilot project are resource-intensive, and the effectiveness of partial adoption is unknown.

Next Steps

- The qSOFA e-learning module will be rolled out to all units that use qSOFA as part of MWHC FY25 annual nurse education.
- Impacts to subsequent process and patient outcomes will be explored.
- Project materials and protocols have been made available to the MWHC sepsis committee.

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Acknowledgements

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- Dr. Nick Ghartey, DNP, RN, CNL - hosting the project, supporting communication with nurses
- Bill Norbeck, MS - e-module and knowledge questionnaire development

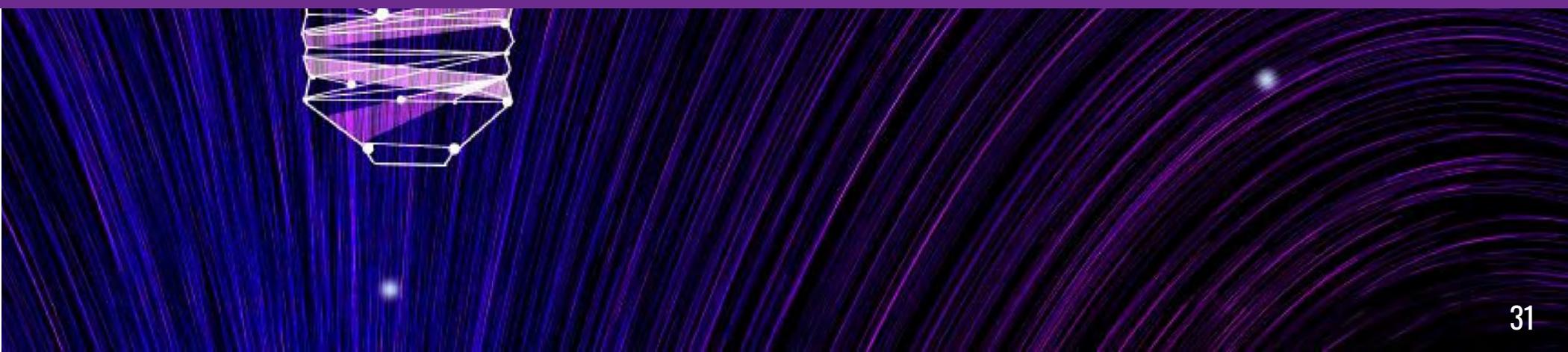


Ensuring Patient Safety Through Certified Communication of Critical Results



MedStar Washington
Hospital Center

Bora Haik, BSN, BA, RN; Sara E. Groff Yoon, MSN, RN, CMSRN; and Crystal Morales, MS, BSN, RN



Introduction

Efficient communication with patients is the cornerstone of safety and quality care. Providers often face challenges to convey vital health information to patients, and burnout on time spent repeatedly trying to reach them. Delays can result in patients missing health appointments, and risks to their well-being. The Quality & Safety Department at MedStar Washington Hospital Center has launched a Critical Results Certified Letter Initiative, using PDCA to design a timely patient notification when other communication attempts by providers are unsuccessful.

Methods

Plan:

Identified a communication gap for critical results, analyzed the current process, examined inefficiencies, such as the limited time providers have for follow-up calls and the need for a backup communication strategy, and set objectives for improvement.

Do:

Created a standardized process wherein providers, after three unsuccessful attempts to contact a patient, triggered the Critical Results Certified Letter initiative. A letter clearly explained the urgency and next steps, and ensured patients are aware of their test results and for the need of immediate follow-up.

Check:

Tracked key performance indicators (KPIs) such as the successful patient contacts made, the days taken to notify patients, and patient response to schedule follow-up appointments, showed a significant reduction in communication delays and an increase in patient engagement with their care teams.

Act:

Refined and standardized the process using feedback from providers and patient. The success of this initiative demonstrated the approach can be effectively applied to healthcare communication processes, and lead to measurable and replicable improvements.

Impacts

Provider Time Spent:

Reducing time spent to notify patients regarding critical results is crucial to improving patient outcomes. Studies show that providers dedicate a significant portion of their day trying to reach patients through repeated communication attempts.

Challenges in Reaching Patients:

Current outreach methods have highlighted barriers including:

- socioeconomic factors in our underserved populations (e.g. access to phones)
- voicemails not set up, loss of cell service, or dedicated time to make and respond to calls
- patient portal usability or even patient willingness

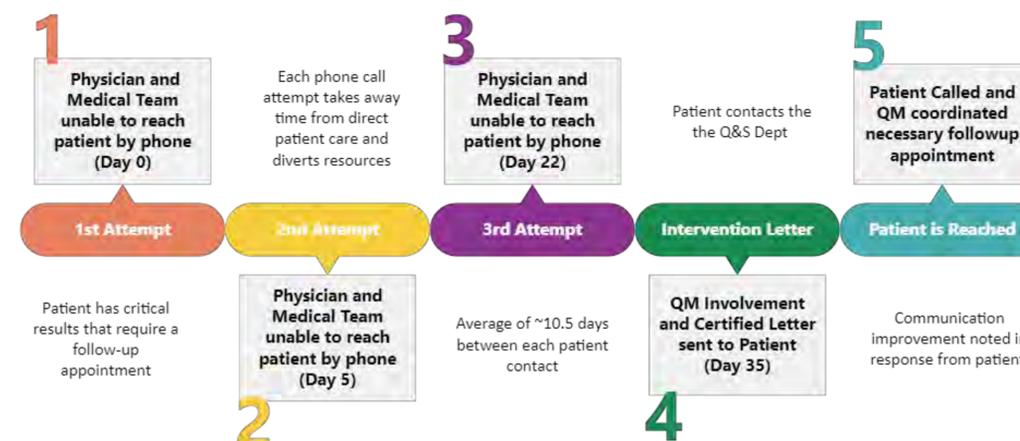
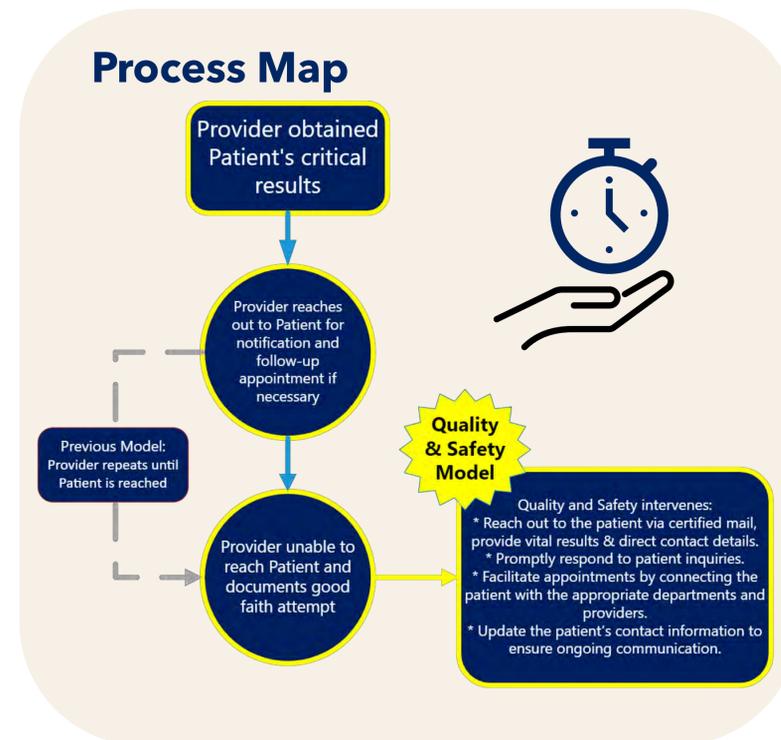
A substantial number of Medicare patients at 26.3% lacked access to smartphones or a desktop/laptop computer with fast internet. Innovative methods to streamline patient-provider communication are vital to ensure patients are reached and understand their healthcare needs.

Cost of Treatment Delay:

The potential for dire complications, requiring emergency/critical interventions, and lengthy and costly hospital readmissions occur with any communication delay. Healthy People 2030's national objectives encourage people to receive the recommended treatments to improve their health and wellbeing including improved communication between providers and patients.

Conclusion

Providers reported this as a positive step to remove barriers to patient care and increase time efficiency. The provider team was able to communicate the gravity of the patient's condition and assign a necessary appointment, aligning with the IHI Triple Aim for improving population health, improving the patient experience of care, and reducing per capita costs.



Key Performance Indicators (KPIs):
 1) Average time spent and contact attempts made unsuccessfully to reach the patient
 2) Overall length of time to close loop communication
 3) Successful patient contact made through certified letter
 4) Patient compliance to schedule a follow-up appointment

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5. MWHC HRO Hub

Acknowledgements

This project and continuation was made possible by the MedStar Washington Hospital Center Department of Quality and Safety in conjunction with leadership – Crystal Morales, AVP of Quality and Safety, Dr Mangala Gulati, VP Chief Quality Officer, Dr Ira Shockett and Dr. Nikiya Asamoah, and Warren Adams, Sr Dir of Professional Services. We sincerely appreciate the visionary team at MedStar Health who understand the value of utilizing assessments to enhance both individual and team performance.

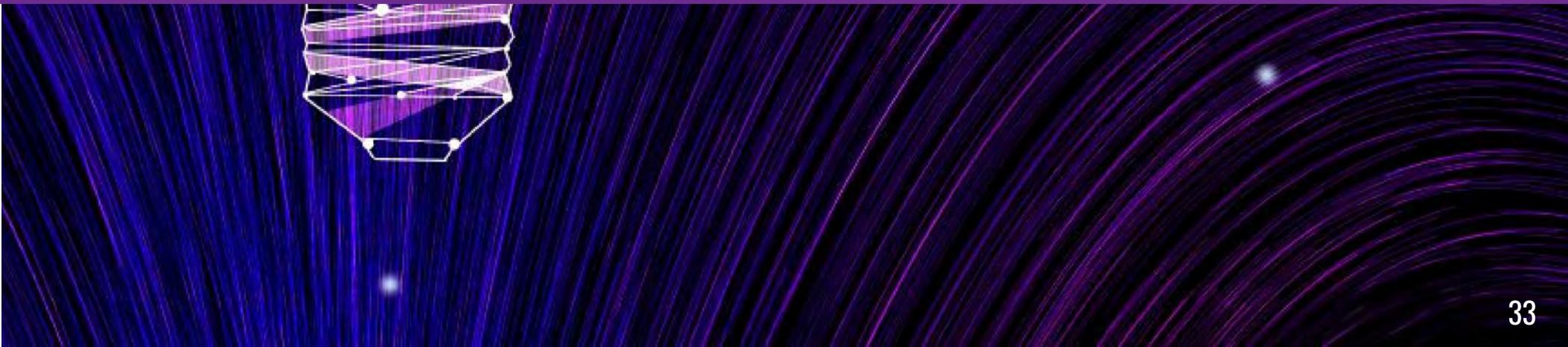


A Warmer Welcome: Improving the Admission Temperatures of Preterm Infants Admitted to the Neonatal Intensive Care Unit



MedStar Washington
Hospital Center

Chelsea Midtvedt, EM-CQSL, BSN, RNC-NIC



A Warmer Welcome: Improving the Admission Temperatures of Preterm Infants Admitted to the Neonatal Intensive Care Unit

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Background

- Preterm infants are at high risk for developing hypothermia between birth and admission to the neonatal intensive care unit (NICU)
- Hypothermia is preventable, and there are evidence-based supplies to assist in its prevention
- Inconsistencies were identified (scattered locations and limited availability of supplies)
- Variability in staff knowledge, perceptions, and comfort levels lead to a lack of uniformity in the warming process

Introduction

- Hypothermia is associated with increased short- and long-term morbidities and mortalities
- Various warming strategies exist
- Inconsistent availability and usage of warming materials complicate effective care.

Purpose

- Evaluate if implementing a specially designed warming kit and providing staff education can reduce the incidence of hypothermia among preterm infants admitted to the NICU and improve staff knowledge and comfortability in providing warming measures



Figure 2
 Collaborated with a human factors expert to develop the physical warming kit that NICU nurses take to preterm deliveries. The goal was to make supplies more accessible and for it to act as a physical reminder of the importance of obtaining normothermia in these fragile infants.

Methods

- Participants: preterm infants < 32 weeks, and the neonatology staff involved in their care
- Data Collection: chart reviews to collect admission temperature data, and pre- and post- surveys assessed staff perceptions and attitudes
- Design: longitudinal, quasi-experimental study analyzed temperatures, comparing data from before and after the implementation of a physical warming kit that was designed and placed in the NICU
- Staff education on proper warming processes and risks of hypothermia were presented during in-services, reaching over 80% of the staff

Results and Data

Descriptive Statistics: Survey Results

- Pre-Implementation Themes
 - Variations in knowledge of who was responsible for supplying certain materials
 - Time it takes between delivery and admission to the NICU
- Post-Implementation Themes
 - 100% of clinicians who used the kit said that all supplies were immediately accessible
 - Uniformity in warming process

Process Metrics: Measurement of Kit Utilization

- Resource nurse records use of kit in a record book
- Recorded as used for 31 out of the 50 total deliveries (62%) since implementation on 3/11/2024.

Clinical Outcome Measures: Temperature Data

- Average admission temperature pre-implementation: 36.4°C
- Average admission temperature post-implementation: 36.7°C (0.3° increase)

Limitations

- Delivery room temperatures (primary confounding variable)
- Assurance of kit utilization and uniformity in utilization
- Infant acuity and individual characteristics (lower gestation infants and smaller infants are more challenging to keep warm)

Conclusion

The introduction of the Neonatal Warming Kits and education have been successful in improving clinicians' ease and comfortability in providing warming measures to preterm infants. With the human factors design approach to the kit, it not only acts as a physical intervention, but a mental reminder of the importance of preventing hypothermia. Thus far, quantitative data has shown an improvement in the average admission temperature of infants born < 32 weeks gestation (data analysis is still ongoing).

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Acknowledgements

Special thanks to the faculty and staff of the Executive Master's in Clinical, Quality, Safety, and Leadership program at Georgetown University for their guidance and support through this capstone project.

Figure 3

Pre-Implementation data starting in 2023. The red line indicates the average admission temperature, which was 36.4°C. The goal admission temperature is 36.5°C to 37.5°C

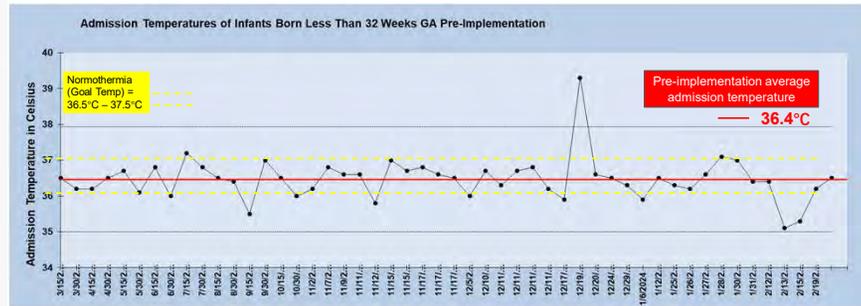


Figure 4

Educational in-services and warming kit implementation occurred starting in March 2024. The red line indicates the post-project-implementation admission temperature, which was 36.7°C

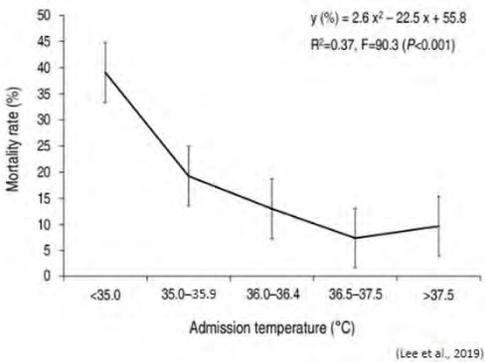
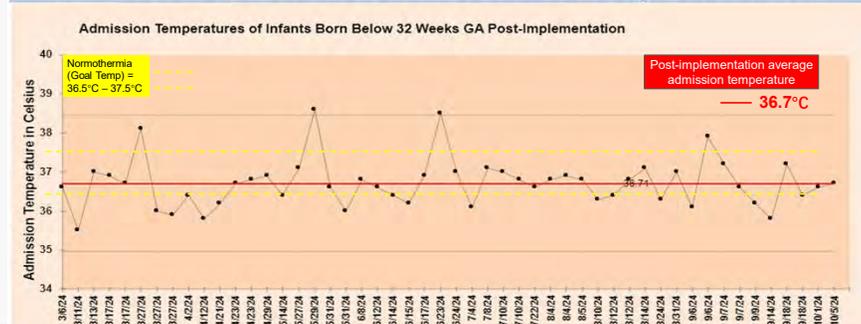


Figure 1

Data from Lee et al., 2019, illustrating how mortality rate increases as admission temperatures decrease.



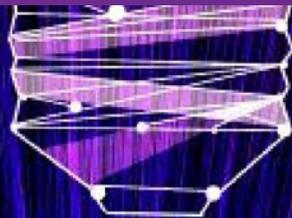
Extending the 48-Hour Hold: Improving Clinical Outcomes for Involuntary Patients with Acute Behavioral Health Symptoms



**SIBLEY MEMORIAL
HOSPITAL**

JOHNS HOPKINS MEDICINE

Erica Richards, MD, PhD & Barbara Hirsch, Esq.



Extending the 48-hour Hold: Improving Clinical Outcomes for Involuntary Patients with Acute Behavioral Health Symptoms



Erica Richards, MD, PhD, Medical Director, Department of Psychiatry, Sibley Memorial Hospital
Barbara Hirsch, Esq., Senior Counsel, Clinical Affairs, Johns Hopkins Health System

PROBLEM

Patients presenting to a hospital ED may have such a severe mental health condition that involuntary admission is needed.

An emergency petition (“FD-12”) needs to be in place for the ED to involuntarily “hold” the patient while the hospital locates an “involuntary bed.”

The # of emergency petitions filed in D.C. often exceeds the availability of involuntary beds:

CY 2022: **2,493** petitions were filed
CY 2023: **2,930** petitions were filed

More patients are in need than the limited **130** licensed involuntary beds can accommodate.

Legally, in D.C., a patient presenting to the ED, in need of involuntary care and treatment, can only be held for **48 hours**.

If there is no available bed, a subsequent renewal of a 48-hour hold is NOT permitted by law.

➡ This creates both ethical and medical issues for the provider because discharging the patient from the ED is unsafe and the opportunity to ultimately treat the individual is lost.

➡ This often initiates a cycle of repeated emergency room presentations of the same patient, often requiring up to seven separate evaluations before the patient is admitted to an available bed for involuntary care.

OBJECTIVE

To identify an innovative approach to improving the clinical outcomes for the patient on an involuntary hold, before the hold expires.

A 36 year-old patient in your ED is on a 48-hour hold. The hold is about to expire, but there is no available involuntary bed. What do you do?

METHOD

This problem could not be resolved through any traditional Quality Improvement tool.

➡ Instead, an interpersonal, collaborative effort between subject matter experts from Psychiatry and Legal leadership set out to resolve the issue.

#1

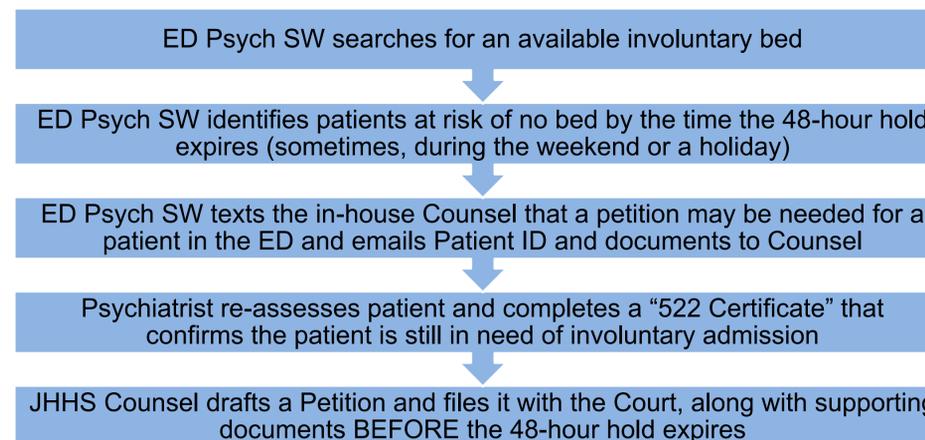
Sibley took advantage of a law currently available only to public hospitals, licensed to provide involuntary beds:

This law allows public hospitals to petition the Court to extend the 48-hour hold by seven days. Sibley, a private hospital, sought to apply the same law.

However, Sibley had to persuade the Court that it could meet the obligations of the law and file the Petition BEFORE the 48-hour hold expired.

#2

A Standard Operating Procedure was designed, tested, modified, and implemented:

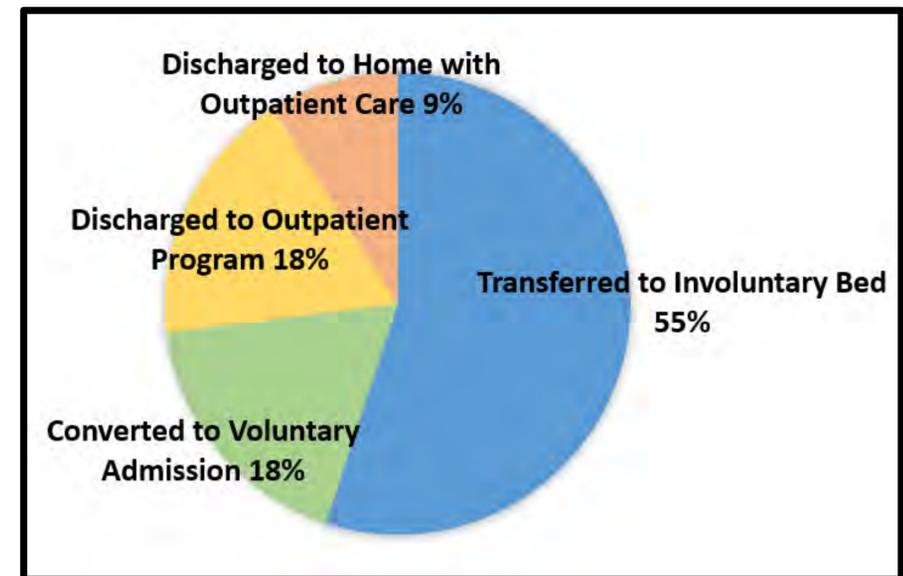


RESULTS

During FY2024: None of the involuntary holds expired before a safe disposition was identified and set in place:

1. For 11 patients, there were not available involuntary beds anywhere in D.C. before the 48-hour hold was to expire.
2. Petitions were filed in all 11 cases.
3. The Court issued an Order to extend the 48-hour hold in all 11 cases.

Final Disposition of the 11 Patients with Extended Holds



REFERENCES

D.C. Code §§ 21-251 to -528, Involuntary Admission and Detention

[Emergency Psychiatric Services | dmh \(dc.gov\)](https://www.dmh.dc.gov/)

[Councilmember Christina Henderson Introduces Legislation to Support Commitment Procedures for those Experiencing Mental Health Crisis \(christinahendersondc.com\)](https://www.christinahendersondc.com/)

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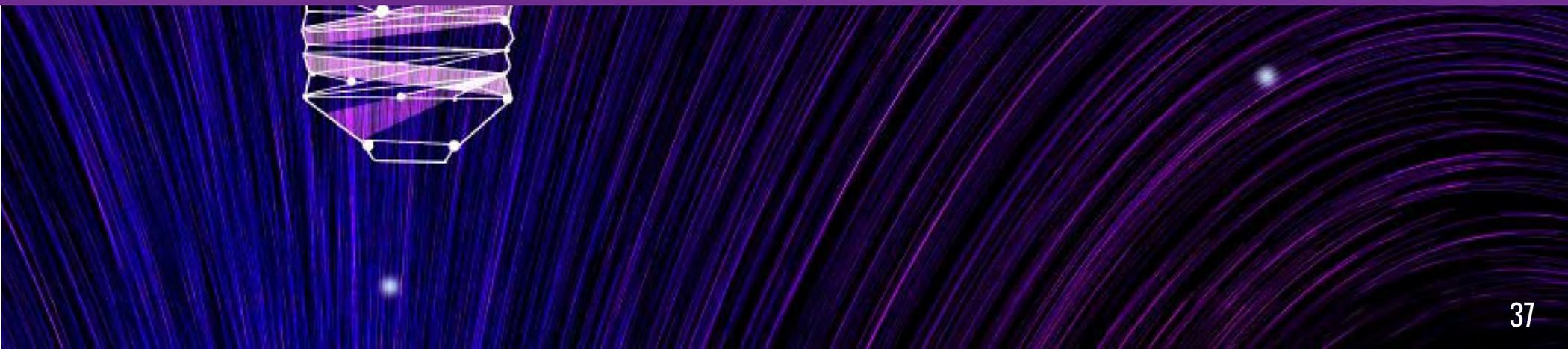
Sibley Memorial Hospital's Journey to Becoming a High Reliability Organization



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Sharon Powell, MS, RN, CPHQ



Sibley Memorial Hospital's Journey to Becoming a High Reliability Organization (HRO)

Issue

- The Institute of Medicine (IOM) and other agencies and regulatory bodies stress the urgency of transforming hospitals, so patients receive safe care. Health care looked to commercial aviation, nuclear power, and aircraft carriers known as HROs. HROs are organizations with strong safety cultures who avoid catastrophic errors while achieving their goals. Two years ago, Sibley began an HRO journey.
- The Centers for Medicare & Medicaid Services (CMS) added a new quality measure this year to assess how well hospitals have implemented strategies and practices to strengthen systems for safety.

Aim

Sibley's goal is to create a culture of safety, protecting patients, and supporting employee well-being and then fostering this mission-driven culture. This includes greater staff engagement, collective mindfulness, and improved patient safety.

Methods

Sibley consulted with a company skilled in high reliability to make this cultural transformation using safety science and high reliability concepts including:

- Constructed a strategic roadmap to ensure safety is first in everything we do
- Educated all staff, providers, and leaders on evidenced based Universal skills
- Educated all hospital and medical staff leaders on embedding skills among their team
- Created a more robust and action oriented daily safety huddle
- Implemented leader high reliability rounding on staff and patients
- Implemented daily management unit boards for communication of patient care concerns
- Educated safety team on cause analysis for improved root cause analysis and actions
- Created a Serious Safety Event Rate to monitor improvement

Data



"Leadership actions show that safety is a top priority"



"Ensuring patient safety is part of the way we do things around here"



"This organization takes genuine interest in employees' well-being"

Results

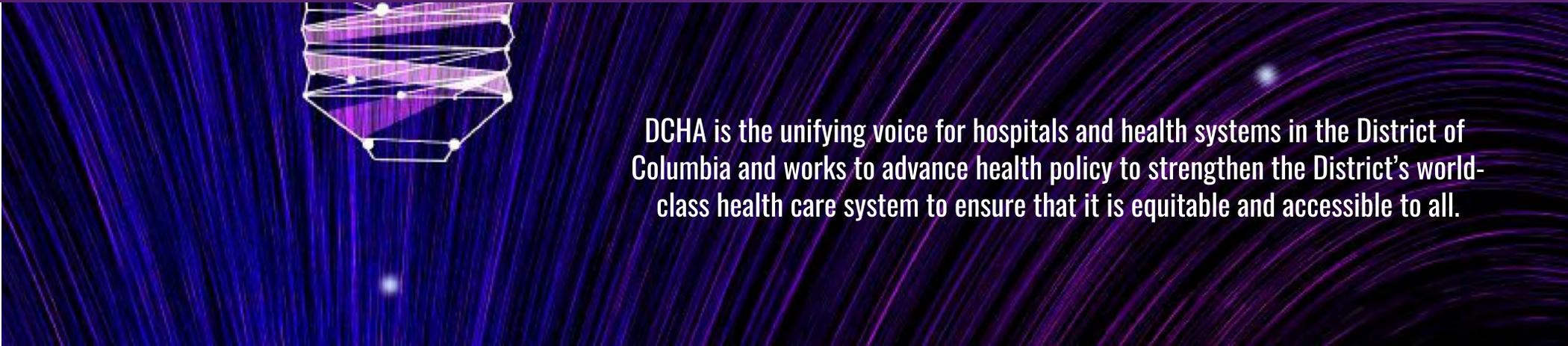
- 100% of staff trained in Universal Skills
- 97% of leaders trained on Leader Skills
- Event reporting increased
- Serious harm scores decreased
- RCAs increased
- Spring 2024 Safety Culture survey
 - Response rate improved by 27% to 74% (most improved)
 - Every survey score improved
 - 3 top survey strengths
 - leader's actions show safety is a top priority
 - patient safety is part of the way we do things around here
 - the organization takes a genuine interest in employees well-being



District of Columbia Hospital Association



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