

# Maryland Patient Safety Center Minogue Awards 2023



## **University of Maryland Baltimore Washington Medical Center**

*Implementation of an Acute Interdisciplinary Care Model to Improve COPD (AIR- COPD) Outcomes*

Submitted by: Katrina Roux-Bernstein, Pulmonary Nurse Practitioner

Chronic Obstructive Pulmonary Disease remains a significant source of morbidity and mortality in the United States. The estimated direct costs of COPD are \$32 billion, and the indirect costs \$20.4 billion.<sup>1</sup> Hospitalizations and readmissions from exacerbations of this disease are the significant contributing cost factor related to COPD. Building on a University of MD system wide release of a COPD care path to standardize the care of inpatients with COPD, UM Baltimore Washington Medical Center created a COPD team – Acute Interdisciplinary Response for COPD (AIR-COPD) - that would integrate interdisciplinary management of the COPD care path across the inpatient/outpatient spectrum to improve chronic medication optimization, safe care transitions and coordination, and improve outpatient pulmonary pharmacy access and follow up. The program provides a pulmonary provider/nurse practitioner, pharmacist, and transitional nurse navigator in close collaboration to care for COPD patients across the spectrum of inpatient/outpatient care at BWMC. The team was able to improve rates of chronic medication optimization for COPD, access to smoking cessation medications, outpatient pulmonary appointment access to quick post-discharge appointments, and ultimately was able to reduce the need for patients to unnecessarily come back to the hospital for breathing problems related to their COPD. This program highlights the importance of interdisciplinary pulmonary care as patients transition from inpatient to outpatient care.



## **University of Maryland Baltimore Washington Medical Center**

*Adapting ST Elevation Myocardial Infarction (STEMI) Care During a Pandemic*

Submitted by: Cheryl Coale, Nurse Manager- Cardiac Cath Lab

The Covid-19 pandemic identified an overwhelming demand for intensive care unit (ICU) beds. As the pandemic moved across the United States, UM Baltimore Washington Medical Center's (BWMC) senior leadership challenged nursing and physician leaders to develop initiatives to reduce the demand for ICU beds and consider alternatives in response to the approaching surge of Covid patients. BWMC has a robust and busy STEMI program, averaging 160 STEMIs annually. As per the initial CPORT study requirements, each STEMI would utilize an ICU bed for up to 72 hours post procedure upon leaving the Cardiac Catheterization Lab (Cath Lab). It was recognized quickly by Cath Lab leadership that we would need to consider alternatives to using ICU bed resources once the pandemic hit our state. Upon review of recent literature, the decision was made to identify hemodynamically stable STEMIs post procedure and place them in the Progressive Care Unit (PCU) when they met PCU admission criteria. The impact to the hospital would improve access to ICU beds for Covid-19 and other high acuity patients. Following implementation of the initiative over a two-year period, BWMC saw a 69% reduction in ICU utilization by STEMI patients, resulting in a \$250,063 cost reduction.



***Johns Hopkins Armstrong Institute for Patient Safety and Quality***

*Hero: Using Technology to Improve Reporting Culture*

Submitted by: Eileen Kasda, Director of Patient Safety, Johns Hopkins Health System

Despite event reporting data being a critical data source in high-risk industries, current software applications in healthcare provide a poor user experience for both reporters of events as well as reviewers and leaders responsible for utilizing the data to improve care delivery systems. Among the top barriers to reporting is the amount of time it takes to submit an event, the belief that reporting is punitive, and the lack of feedback after an event has been reported. These barriers often prevent safety issues from being reported and thus organizations are missing valuable opportunities for learning and improvement. Additionally, current software applications on the market lack robust analytics necessary to turn the qualitative data contained in these event reports into actionable insights that ultimately improve patient safety. The Armstrong Institute for Quality and Patient Safety believed event reporting tools needed advanced innovative analytics necessary to identify patterns and make sense of emerging areas of risk. **Hero** is the next generation of event reporting systems and is the first software application developed by patient safety experts and event reporting users, for event reporting users. The median time to report an event in the Hero system decreased to less than 8 minutes, a 1.5 minute decrease from the previous application. Six percent of events are now reported by physicians, an increase in physician reporting over pre-implementation rates. **Hero** has also helped to improve analytics for managing and analyzing large amounts of qualitative data has shown a light on important safety and culture concerns that may have existed in the previous system but did not receive adequate attention due to an inability to detect the patterns in the data and transparently share them.

## **Kennedy Krieger Institute**

### *Implementing Suicide Prevention Through Universal Suicide Risk Screening*

Submitted by: Suzanne Rybczynski, Assoc. Chief Medical Officer & VP Quality, Patient Safety & Professional Affairs

In 2016, the Joint Commission released a Sentinel Event Alert which encouraged healthcare organizations to screen all patients for suicide risk in all healthcare settings using a standardized, brief, and evidence-based tool. With increasing rates of suicide in the United States, the Kennedy Krieger Institute committed itself to perform suicide risk screening for all individuals aged 8 or older in our outpatient clinics. As the Institute's focus is on the care of people with neurodevelopmental disabilities (NDD), the approach was unique in that patients with NDD were not preemptively disqualified from screening. Many individuals with NDD have underlying mental health co-morbidities that may not be addressed and caregivers and healthcare team members may not even be aware of suicidal thoughts and behaviors. Due to the complex nature of implementation, the screening program was initiated in the medical clinics followed by the mental health clinics. An interdisciplinary task force was convened to identify best practices for suicide risk screening, a screening tool and toolkit were designed, and to provide clinical staff education in suicide prevention, diagnosis and management of suicidal ideation (SI), and the institutional screening protocol. In the first six months 73.3% of patients eligible were screened, and 6.8% of patients screened positive, comparable to children seen in outpatient pediatric specialty clinics and in pediatric emergency rooms. Seventy-seven percent of positive screens had appropriate documentation of follow up questions with 92% of patients scheduled for follow up appointments. Clinics identified with higher rates of positive screening including autism clinic, chronic pain clinic, and concussion clinic.

## **LifeBridge Health Northwest Hospital**

### *Promoting a Culture of Safety and Zero Harm using Safety Huddles*

Submitted by: Maulik Thaker, Executive Director Zero Harm Program

The daily safety huddle first started at the hospital in April 2020 with the intention to make way for more effective collaboration to manage capacity and patient flow. It was of paramount significance during early 2020 to align, prioritize, and communicate critical daily needs with a looming pandemic while underscoring our laser focus—the safety of our patients and employees. Since then, the daily safety huddle has evolved and been refined to integrate and guide a journey to high reliability and zero harm. The huddles have developed over two plus years to include the state of the hospital, follow up on action items from the previous day, review of new safety concerns and assignment of ownership for follow-up. Through development of a consistent format, guiding principles and standards for the huddles, and accountability for attendance and follow-up and the use of advanced electronic monitoring systems and dashboards to measure performance of key metrics Northwest has made significant improvements in ED length of stay, patient falls and hospital acquired pressure injuries

## **LifeBridge Health Sinai Hospital**

### *Clinical Excellence Report Cards: A Data-driven Approach to Evidence-based Patient Care*

Submitted by: Sarah Stanley, Team Lead- Nursing Outcomes Leaders

In early Spring 2021, the Clinical Excellence (CE) reviewed Sinai Hospital's nursing sensitive quality indicators and examined how the team could more consistently support the nursing staff in identifying opportunities for improvement. The CE Team set out to take a *proactive* approach to nursing data collection to better identify gaps in care delivery and build more robust programs to prevent these complications before they reach the patient. A daily rounding model designed to address evidence-based care bundle compliance for Catheter Associated

Urinary Tract Infection (CAUTI) and Central Line Associated Bloodstream Infection (CLABSI) prevention had been developed in 2015 with very positive results. The Team adopted and expanded this rounding model to three other measures- falls, Hospital Acquired Pressure Injury (HAPI), and aspiration pneumonia. Monthly Clinical Excellence Report Cards were developed to track and trend nursing care bundle compliance and to target interventions to improve compliance with bundle elements. Since beginning rounding in May 2021, Sinai has decreased CAUTI by 59%, CLABSI by 36%, avoidable device related HAPI by 45% and a 25% reduction in overall avoidable HAPI. Finally, Sinai saw a 20% reduction in fall rate and 21% reduction in fall with injury rate.

### ***LifeBridge Health Sinai Hospital***

*HAPI Not Welcome Here: A Hospital-Acquired Pressure Injury (HAPI) Reduction Collaborative*

Submitted by: Brooke Vacovsky, Clinical Nurse Specialist

In FY21, Sinai Hospital experienced a total of 212 HAPIs. Of the 212 HAPIs, 91 were deemed avoidable and of those 91, 38 HAPIs were specifically related to medical devices. As FY22 approached, a multidisciplinary team collaborated to identify areas of opportunity for HAPI prevention. The HAPI Reduction Collaborative was formed to identify gaps and barriers in the implementation of evidence-based practices. The collaborative developed extensive mitigation and process improvement to ultimately drive high quality care and reduce patient harm through the prevention of HAPIs. A comprehensive action plan for tracking of initiatives, responsible personnel, barriers, and timelines for completion was created. Additionally, the action plan was utilized by the collaborative to divide deliverables amongst the team in a meaningful manner to drive initiative completion. Progress within each initiative was captured by determining percentage towards completion and an associated initiative status. Initiatives were driven by HAPI incidence data, trends, and organizational opportunities for alignment with evidence-based practices. Sinai Hospital saw a significant reduction in HAPIs from FY21 to FY22 as a direct result of solution implementation. Avoidable HAPIs were decreased by >25%, ultimately exceeding the organizational stretch goal of 15%. Additionally, the organization reduced avoidable device related pressure injuries by nearly 45% from FY21 to FY22. NGT related pressure injuries were reduced by over 50% and elbow immobilizer related pressure injuries reduced by 100% over the same timeframe. The organization estimated approximately \$1.3 million in HAPI cost avoidance.

### ***Luminis Health Anne Arundel Medical Center***

*Improving Processes to Prevent & Detect Drug Diversion*

Submitted by: Christine Frost, Chief Nursing Officer/VP Nursing

Drug diversion in the healthcare setting presents a significant patient safety risk, potentially resulting in inattentive care, serious injury, infection, or death. In fall 2019, Luminis Health (LH) Anne Arundel Medical Center (AAMC), launched an initiative to enhance oversight of drug diversion prevention and detection across the clinical practice environment. A Drug Diversion Prevention Workgroup (DDPW) was tasked with making recommendations for structuring the initiative, reviewing current policies and proposing changes based on current best practice. Interdisciplinary collaboration was a cornerstone of the solution we identified with an innovative relationship-based approach between the Lead Automation & Controlled Substance specialist and frontline nurse leaders. This promoted an environment of transparency, mutual respect and collaboration. Most importantly, robust collaboration enabled the organization to move from a policing mentality to one of trust, shared commitment toward workplace safety, and cooperation toward a common goal. Further, leadership dedicated additional resources at all levels, not only in the purchase of sophisticated ADM surveillance software and the expansion of the LACSS position, but also in funding time for directors and clinical staff to participate in education and solution-finding meetings. Between January 1, 2020 and September 30, 2022, LH AAMC realized:

- 95.14% decrease in the number of medications removed on override but unlinked to provider order
- 92.66% decrease in the percent of all override removals that remained unlinked
- 93.21% decrease in the number of undocumented controlled substance waste transactions

Between April 1, 2020 and September 30, 2022, LHAAMC realized:

- 74.36% decreased in undocumented controlled substance waste

### ***Luminis Health Anne Arundel Medical Center***

*Transitional Care: Supporting Vulnerable Patients After Hospitalization*

Submitted by: Sarah Brace, Manager Transitional Care

Luminis Health (LH) Transitional Care facilitates is a program that provides wrap-around, frictionless care to vulnerable, high-risk patients across the healthcare continuum. Patients are referred to this program following an Emergency Department, Observation, or Inpatient stay at LH AAMC by their care team members to include providers (MD, PA, NP), nursing, therapy services, care management, and ethics. The patients are assessed for risk of readmission and social determinants of health that may prevent the patient's success after discharge. A consultation for the team is then placed via the electronic medical record (EMR). Patients are assigned to a nurse based on the patient's geographic location in the hospital to include all medical/surgical units, post-partum obstetrics, and the Emergency Department. The program is discussed with the patients, and they are provided a transitional care folder with tabs to allow for organization of the paperwork they might receive while in the hospital. Six months post implementation of the program there has been a 33% decrease in cost, a 15% decrease in visits and month over month, patients enrolled in Transitional Care can expect to have a lower rate of hospital readmission than what is predicted via a Readmission Risk Score in EPIC.

### ***University of Maryland Baltimore Washington Medical Center***

*Implementation of High Flow Nasal Cannula (HFNC)*

Submitted by: Pamela Nehring, Senior Clinical Nurse II and the Pediatric Clinical Nurse Educator

High flow nasal cannula is increasingly being implemented in pediatric intensive care units (PICU), pediatric progressive care units (PPCU), and the emergency department as a therapy for infants and children with respiratory distress. HFNC is a therapy that supports respiration by reducing inspiratory resistance, reducing nasopharyngeal dead space, improving airway conduction, and improving mucous clearance. There is little information about implementing the HFNC therapy on an inpatient pediatric unit in a hospital without a PPCU or PICU. The HFNC program at BWMC is a nurse lead initiative developed to safely implement HFNC program on a general pediatric unit without an in house PPCU or PICU. The target population was primarily for children below the age of two with a diagnosis of bronchiolitis. A best evidence search of the literature was conducted to develop a guideline for safe HFNC flow rates and FiO2 for an inpatient general pediatric unit. A multidisciplinary team of pediatricians, nurses, and respiratory therapist created the guideline. The first year eleven patients were admitted to the inpatient pediatric unit on HFNC. The data revealed that 55% of children were transferred to a higher level of care and that 45% of children were discharged to home from the pediatric inpatient unit. The low volume of HFNC patients was due to the low pediatric admission rate during the COVID-19 pandemic. Although a small number of patients were admitted the first year, a process improvement for quality of care and patient safety resulted from the admissions. The process improvement involved adjusting initial flow rates to the maximum allowed on the pediatric inpatient unit, and adjusting maximum HFNC rates to widen the safe window for transfer. The improved process the second year, FY22, resulted in a 78% improvement rate for discharge to home rather than transfer from the inpatient pediatric unit. All infants/children, who required transfer to a higher level of care, safely transferred to a higher level of care and did not require intubation prior to leaving the unit