PINNACLE AWARD FOR QUALITY AND PATIENT SAFETY

PROFILES IN 2020 Quality and Patient Safety

HANYS Pinnacle Award for Quality and Patient Safety

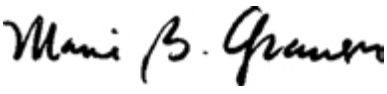
Profiles in Quality and Patient Safety 2020

We are pleased to share this annual compendium of the nominations for the Healthcare Association of New York State's Pinnacle Award for Quality and Patient Safety. This award recognizes organizations that are playing a leading role in promoting improvements in healthcare delivery in New York state.

The healthcare providers from across the state represented by these 137 nominations are taking bold steps to improve patient care and outcomes. During this time of rapid change and uncertainty, their passion for innovation and ongoing improvement is critical to advancing the health of individuals and communities.

HANYS thanks its members for their willingness to share their ideas, experiences and successes through their Pinnacle Award submissions. We encourage all members to take advantage of the information in this publication as a means to inform and accelerate ongoing efforts to improve quality and patient safety.

Sincerely,



Bea Grause, RN, JD
President

Congratulations to our 2020 Awardees

Maryhaven Center of Hope

Post-acute/Outpatient provider

Reducing Aggressive Behaviors and Injuries to Staff via De-escalation Training and Debriefing

The Saratoga Hospital

Hospital with less than 200 beds

Eliminating Unnecessary Treatment of Clostridioides Difficile Infection and Associated Patient Harm through Innovative Diagnostic Testing and Antibiotic Usage Reduction

SBH Health System

Hospital with 200 to 500 beds

The New Definition of "Clean" — Use of Adenosine Triphosphate Bioluminescence Surface Testing to Validate Cleaning Practices and Aid in Decreasing Hospital-acquired Infections

Northwell Health

System or hospital with 500+ beds

Implementation of a Centralized Mortality Review Process Across a Large Integrated Healthcare Organization

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Chapter 1:

Culture and Leadership

Employee Engagement and Safety

Reducing Staff Injury through Safe Patient Movement Program

A.O. Fox Memorial Hospital, Oneonta

EXECUTIVE SUMMARY

In 2015, New York state adopted safe patient handling laws. A.O. Fox Memorial Hospital conducted a gap analysis and needs assessment. This included analyzing staff injury data and reviewing available equipment. The hospital established a Safe Patient Movement Committee and contracted with a reputable company specializing in patient movement to obtain new equipment, training and support with a goal to decrease the number of staff injuries to less than three per quarter. The SPM team developed and implemented the program using the Plan-Do-Study-Act methodology. Automating the employee incident reporting program and educational tools provided the SPM team with timely data to continuously improve the program. Thus far, the hospital has modified the new employee orientation program, developed educational tools and implement an SPM resource portal on the intranet. Reports from this program are shared with safety, management review staff and the hospital board to assist in removing barriers and monitoring corrective actions.

OUTCOMES ACHIEVED

- The number of staff injuries related to safe patient handling decreased to zero since September 2019.
- Fewer injuries in turn has reduced the number of Workers' Compensation cases and associated costs.
- The hospital maintained zero patient hospital-acquired injuries from falls or skin breakdown.

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Organizational Advancement through Trauma-informed Care

Catholic Health – Mount St. Mary's Hospital, Lewiston

EXECUTIVE SUMMARY

From 2017 to 2020, Catholic Health contracted with the Institute on Trauma and Trauma-Informed Care to facilitate creating a culture of trauma-informed care. Mount St. Mary's Hospital was selected as the original pilot site for this initiative. The work MSM did during the original project period laid the foundation for trauma-informed culture change by focusing on education and engagement with staff in various units across the hospital. Currently, MSM is building on that foundation by continuing engagement with staff on the floors, as well as the TIC Journey Group leading the implementation process, to look at things like policies and procedures, messaging and communication strategies, the physical environment and supports for the workforce to counter burnout and compassion fatigue. As a result of this process, the initiative leaders have already seen changes in workforce perspectives and an intentionality around being responsive rather than reactive.

OUTCOMES ACHIEVED

- The number of staff across departments that actively participate in initiative activities increased.
- Alignment of TIC values with mission-based work is shown by improvement in patient experience scores.
- The formation and growth of the TIC Journey Group ensures oversight and sustainability.

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Safety Starts with Me: A Health System's Journey to High Reliability

Catholic Health Services of Long Island, Huntington

EXECUTIVE SUMMARY

As Catholic Health Services began the journey to high reliability, its initial approach was to identify preventable harm, by commission or omission, in its facilities, and designate those as serious safety events. Armed with that knowledge, CHS developed error prevention training and educated every employee and physician. The health system standardized review and scoring of SSEs so data would be measurable and trackable. CHS instituted system-wide daily patient safety huddles, safety coaches and standardized leader rounding, and applied evidence-based practice teams to employee safety. Since initiation, CHS has reduced SSEs resulting in death or serious permanent harm by 57%, saving 13 patients. CHS eliminated quality penalties at most campuses, significantly improved employee safety and achieved malpractice renewal savings. Most importantly, overall system mortality has decreased as SSE reporting has increased, secondary to the enhanced safety culture.

OUTCOMES ACHIEVED

- Serious safety events decreased by 57%.
- No penalties were incurred at five out of six campuses.
- CHS achieved liability savings of $1.5 million and Workers' Compensation savings of $2 million.

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Changing the Culture in the Emergency Department

Catskill Regional Medical Center, Harris

EXECUTIVE SUMMARY

Catskill Regional Medical Center identified an opportunity to improve the culture in the hospital emergency department, as turnover had been increasing. Changing the culture took multiple steps, starting with explanation of employee relations philosophies and rules, and the introduction of servant leadership. This led to adoption of high-reliability tools such as Just Culture and Rapid Improvement Events. Since changing the culture, staff members are happier to come to work, willingly offer suggestions and are unafraid to report problems when they arise. This has led to improved employee engagement, patient satisfaction, a better culture of safety, lower attrition and a waiting list of nurses who want to work at the hospital.

OUTCOMES ACHIEVED

- Patient satisfaction, employee engagement and culture of safety improved.
- Nurse attrition was reduced to only those who graduate a nurse practitioner program.
- A waiting list was created of nurses who want to work in the emergency department.

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Safety Huddles Improve Staff Awareness

Delaware Valley Hospital, Walton

EXECUTIVE SUMMARY

In 2018, as a member of an integrated health system, Delaware Valley Hospital began the journey of becoming a high-reliability organization by adopting a just culture and emphasizing safety and "zero harm." Preventing errors and improving safety for patients and staff requires a systematic approach to modify conditions contributing to errors. A key step in this journey, implemented in February 2019, was the establishment of safety huddles conducted every morning, Monday through Friday. A safety huddle is a short meeting of representatives from every department, led by the chief executive officer or other senior leader, to share issues that have occurred within the past 24 hours, report any adverse conditions or disruptions expected within the next 24 hours and review actions taken to resolve any previously reported issues. The intention of the huddle is to provide awareness of safety issues and promote communication, teamwork and transparency among all hospital staff.

OUTCOMES ACHIEVED

- Communication between departments and staff improved.
- An emphasis on safety concerns resulted in a more rapid response to correct or address them.
- Identification of good catches and staff recognition encouraged others to speak up.

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Community Hospital Multidisciplinary Rounds to Engage Staff and Cultivate Leaders

Glens Falls Hospital

EXECUTIVE SUMMARY

In an effort to maximize patient safety and outcomes in a rural medical center, multidisciplinary rounds were initiated on medical/surgical units. Goals included engagement and development of leaders who play a primary role in outcomes sustainability. Secondary gains achieved included reducing overall length of stay from 5.01 to 4.1 days with a projected cost savings of about $2 million, improved overall efficiency demonstrated by a reduction in operational costs and elimination of barriers to hospital throughput. Data points showed improvements in 2018 and 2019. Additionally, patient satisfaction improved in the communication with nurses and doctors, discharge information and care transitions domains.

OUTCOMES ACHIEVED

- Increased facilitator scores demonstrated engagement from nursing leaders in standardizing multidisciplinary rounds.
- Standardized MDRs drove a 0.91-day reduction in length of stay hospital-wide.
- Improved Press Ganey scores demonstrated optimized care transitions.

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2020 HONOREE

Reducing Aggressive Behaviors and Injuries to Staff via De-escalation Training and Debriefing

Maryhaven Center of Hope, Melville

EXECUTIVE SUMMARY

Individuals with intellectual developmental disabilities may display severe, challenging behaviors that often result in the use of restrictive physical interventions that can lead to client and staff injuries. The goal of this project was to develop a sustainable, multifaceted approach that provides staff with the tools and supports necessary to safely provide quality services to individuals and thereby improve those individuals' quality of life. By educating and supporting direct support professionals through the introduction of de-escalation training and providing management with the tools to support staff through the debriefing process, there was an overall reduction in the use of restrictive techniques and injuries sustained by staff and clients during aggressive episodes.

OUTCOMES ACHIEVED

- The use of restrictive physical interventions decreased 23% across the agency.
- Challenging behaviors went down in 17 of 29 sites and decreased 23% overall.
- Staff injuries decreased by 35% and Workers' Compensation claims and premiums decreased 31%.

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An Integrated Approach was the Golden Key that Opened the Way to Zero Healthcare-associated Infections

Mercy Medical Center, Melville

EXECUTIVE SUMMARY

To achieve success as a high-reliability organization, healthcare-associated infections must be reduced, ideally to zero. In March 2018, Mercy Medical Center allocated the Hibiclens Universal Bathing System for use. Despite this and the many pre-existing, evidence-based practice bundles in use at the end of 2018, the number of HAIs was higher than anticipated. To get closer to achieving zero HAIs, efforts focused on other possible sources of transmission risk, such as improperly cleaned and disinfected shared patient equipment or the use of inappropriate cleaning products. Increased staff understanding of and buy-in for the standardized interventions led Mercy to operationalize additional phases of the initiative. Utilizing evidence-based practice to guide process improvement via the Plan-Do-Study-Act approach, Mercy implemented phases I through IV (first section only) of the initiative. Interventions have proven successful.

OUTCOMES ACHIEVED

- The medical center achieved zero device-associated HAIs from urethral and central line catheters.
- The medical center achieved zero Methicillin-resistant *Staphylococcus aureus* bacteremia HAIs.
- *Clostridioides difficile* decreased by 36% and Carbapenem-resistant *enterobacteriaceae* was reduced 55%.

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Improving Clinical Outcomes by Engaging the Frontline Staff

Mercy Medical Center, Melville

EXECUTIVE SUMMARY

Mercy Medical Center has a significant population of elderly patients with stays over six days. This length of stay increases their risk of developing pressure ulcers during hospitalization, which presents a challenge for the staff caring for these patients. Pressure ulcer prevention is a nursing quality indicator and is benchmarked by the National Database of Nursing Quality Indicators. Noticing an increase in hospital-acquired pressure ulcers on the unit, the hospital needed to find an innovative way to reduce their incidence. Using the Plan-Do-Study-Act method, Mercy began its high-reliability journey to improve the care of the elderly population and reach its goal of "zero harm." The hospital formed a multidisciplinary team consisting of nursing leadership, registered nurses and frontline staff. After reviewing best practices and related literature to better understand why patients had an increase in pressure ulcers, the team created tools and obtained products to prevent them.

OUTCOMES ACHIEVED

- There was an 81% reduction in the incidence of pressure ulcers from July to December 2019.
- The hospital realized a $382,790 decrease in pressure ulcer treatment costs.
- The risk of lawsuits decreased.

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NewYork-Presbyterian/Source of Support

NewYork-Presbyterian Morgan Stanley Children's Hospital, New York City

EXECUTIVE SUMMARY

NewYork-Presbyterian Morgan Stanley Children's Hospital established NYP/Source of Support to address and prevent compassion fatigue and the negative psychological or emotional impact that healthcare workers may experience after an adverse patient event or critical incident. The program was created by a multidisciplinary workgroup that identified current resources available to support and promote well-being in the setting of a traumatic event. The team compiled resources, established a training model and identified the workflow for the program based on a literature review. A menu of resources was created, first responders were trained and the program was implemented across the entire organization.

OUTCOMES ACHIEVED

- The NYP/Source of Support program was created and implemented hospital-wide.
- Employee engagement improved.

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Journey to Zero Harm: An Achievable Goal

NewYork-Presbyterian Queens, Flushing

EXECUTIVE SUMMARY

In alignment with the enterprise's strategic priorities, NewYork-Presbyterian Queens embarked on a journey to reduce opportunities for patient harm. As part of this journey, NYPQ focused on the core of its values: respect. The focus on respect was the cornerstone of the work surrounding preventive measures to reduce patient harm. To ensure that every role and every person counts, accountability structures such as tiered huddles were introduced using high-reliability principles, and cross-functional partnerships were used to execute tactical goals outlining prevention and reduction strategies. Evidence-based practices supported these goals and provided the framework for problem solving and clinical decision making. By embracing a culture of increased collaboration, transparency and accountability, NYPQ has seen a progressive transformation that has energized staff and helped move the needle toward "zero harm."

OUTCOMES ACHIEVED

- CLABSI occurrences decreased by 95.6%: 23 (2016), six (2017), three (2018) and one (2019).
- The number of *Clostridioides difficile* lab-identified events declined 64.9%, from 97 in 2016 to 34 in 2019.
- There was a 69% reduction in hospital-wide PSI events between 2016 and 2019.

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Redesign of Nursing Leadership Rounds Drives Employee Engagement

NewYork-Presbyterian Queens, Flushing

EXECUTIVE SUMMARY

NewYork-Presbyterian Queens saw an opportunity to address low employee engagement scores in the nursing department. The chief nursing officer and nursing leadership team redesigned leadership rounds to address frontline staff concerns, provide multiple pre-scheduled listening forums on day and night shifts, and ensure issue resolution and communication. The redesigned rounds also included the director of nursing with responsibility for the area being visited and a written stoplight report so that those in attendance and those that missed the rounds knew what was discussed and what was being addressed. The written report also served to hold the CNO and director of nursing accountable for follow-up on identified issues.

OUTCOMES ACHIEVED

- Overall engagement increased 9% from 2018 to 2019 and the mean score increased 0.21.
- The "recognition question" score increased by 0.45, from 2018 to 2019.
- The "cares about me" question score increased by 0.16, from 2018 to 2019.

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Creating and Implementing a Safe Patient Handling Program in a Quaternary Facility

North Shore University Hospital, Manhasset

EXECUTIVE SUMMARY

An analysis of historical data revealed an opportunity to reduce the number of staff-related patient handling injuries and associated costs at North Shore University Hospital. Using the Plan-Do-Study-Act approach, the hospital created and implemented a hospital-wide safe patient handling program. The goals were to decrease patient handling-associated injuries, decrease incurred costs, reduce lost days and improve associated quality metrics.

OUTCOMES ACHIEVED

- In 2019, patient handling injuries decreased by 36%.
- Incurred costs decreased by 29% with an estimated cost savings of $680,000.
- Lost work days decreased 51% from the prior year.

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Developing and Operationalizing a Safety Culture Across an Ambulatory Network

Northwell Health, Manhasset

EXECUTIVE SUMMARY

The "Safety Belongs to Me" campaign is an initiative that evaluates the current systems used by Northwell Health's medical oncology ambulatory network. The SBTM project aims to identify, report and resolve current and future safety risks by implementing weekly interdisciplinary conference calls. In addition, it uses a highly reliable reporting structure for departmental stakeholders (i.e., administration, nursing administration, materials operations, laboratory and pharmacy), thereby increasing situational awareness and preventing complacency as it relates to patient and employee safety risks. Methodologies used include Six Sigma and improvement science tools such as Plan-Do-Study-Act, process maps and driver diagrams. These illustrated how process improvement principles can be employed to provide an effective framework for systematic innovation in healthcare.

OUTCOMES ACHIEVED

- The mean of reported occurrences has increased.
- First-time tracking and reporting of near misses and potential risks occurred.
- A safety management call across leadership was implemented.

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A Culture of Safety from Day One: An Institutional Patient Safety Initiative to Support Incoming Interns

NYU Langone Health, New York City

EXECUTIVE SUMMARY

The transition from medical student to intern can present patient safety concerns. Over the past three years, 541 incoming interns at NYU Langone Health have participated in an authentic, immersive, four-hour "First Night on Call" simulation to ensure that they are ready for common patient safety challenges on day one of residency. The main objectives of FNOC are to prepare and support transitioning trainees, cultivate a culture of safety and create a community of practice. FNOC has been consistently well received, with over 95% of interns agreeing/strongly agreeing that it is an effective way to learn patient safety expectations, goals and processes, is a good approach to improve readiness and is fun and engaging. Six-month follow-up evaluations show that interns feel more comfortable escalating and reporting medical errors. Institutional impact measures, such as the Agency for Healthcare Research and Quality's Culture of Safety Survey and number of patient safety incidents, suggest culture improvement trends.

OUTCOMES ACHIEVED

- Early trainee engagement encourages participation in institutional quality and patient safety improvement.
- Evaluation and impact data from 541 learners over three years show FNOC was well received and effective.
- Variation in new intern performance provides an opportunity for added education and proactive support.

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Reduction of Employee Injuries through High Reliability and Safe Patient Handling Initiatives

St. Catherine of Siena Nursing & Rehabilitation Care Center, Melville

EXECUTIVE SUMMARY

When healthcare employees injure themselves on the job, facilities pay the price in many ways: Workers' Compensation for lost wages and medical costs, overtime for other employees to cover injured employees' shifts and decreased productivity and morale as other employees become fatigued. Manual lifting can injure caregivers and put patients at risk of falls, fractures and skin injuries. The cumulative weight lifted by a nurse in eight hours is equal to 1.8 tons. Nationwide, Workers' Compensation losses result in a total annual expense of $2 billion for healthcare facilities. The U.S. Bureau of Labor Statistics reported that healthcare workers sustain 4.5 times more over-exertion injuries than any other workers and working in a healthcare facility is more dangerous than working in agriculture, manufacturing or construction. St. Catherine of Siena recognized these safety concerns and used a Define-Measure-Analyze-Improve-Control approach to improve, optimize and stabilize its processes.

OUTCOMES ACHIEVED

- St. Catherine of Siena's Workers' Compensation insurance premium decreased from $1,062,204 in 2017 to $694,699 in 2019.
- The number of reported employee injuries decreased from 86 in 2017 to 75 in 2019.
- The number of days lost due to injury shrank from 709 in 2017 to 429 in 2019.

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Target Zero Harm: Our Journey to High Reliability

Strong Memorial Hospital, Rochester

EXECUTIVE SUMMARY

Strong Memorial Hospital has committed to a goal of zero preventable harm through transparency, trust, training and teamwork. Transparency is evident by the sharing of safety concerns. Storytelling about mistakes and how Strong will prevent them in the future is embedded in the organizational culture through a daily safety huddle, weekly harm report and the availability of the hospital's serious safety event rate on an internal webpage. Strong adopted a just culture policy to build trust among staff and caregivers so that they can speak up, identify safety risks and make recommendations for resolving them. The hospital's physicians, nurses and other clinical staff are provided training on teamwork, communication, safety behaviors and improvement science. This ensures that the workforce understands and engages in high reliability behaviors. Strong relies on interprofessional teams at all levels of the organization to focus on robust process improvement that enhances safety.

OUTCOMES ACHIEVED

- Strong's serious safety event rate was reduced from 0.33 to 0.06 in two years.
- The number of staff injuries resulting in lost work time decreased 24% in two years.
- Reports of near misses, close calls and hazardous conditions increased by over 30% in three years.

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All RISE for Pursuing Excellence

University of Rochester Medical Center

EXECUTIVE SUMMARY

The Pursuing Excellence Initiative is a transformative effort at the University of Rochester Medical Center to integrate interprofessional workforce development, education and practice with clinical quality outcomes. It is built upon RUMC's Unit-based Performance Program, rooted in the principle that sustainable improvement must be driven and owned in the clinical microenvironment. PEI leadership partnered a nurse manager with a medical director to lead each of the 13 teams selected for the first cohort. Each dyad was supported by an improvement coach. Online pre-learning, followed by interprofessional, experiential activities was provided in teaming and key aspects of RUMC's Rochester Improvement Science Education curriculum. Teams were charged with implementing initiatives aligned with the organization's priorities. Residents were active participants on teams. PEI has demonstrated both quantitative and qualitative impact in the clinical environment.

OUTCOMES ACHIEVED

- PEI has reduced readmissions, length of stay and emergency department boarding times.
- PEI has promoted teaming and created stronger interprofessional relationships.
- PEI is a catalyst to bridge interprofessional education with improved clinical outcomes.

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Chapter 2:

Culture and Leadership

Patient Experience

Improving Person-centered Care by Reducing Inefficiencies in the Central Scheduling Process

Cayuga Medical Center, Ithaca

EXECUTIVE SUMMARY

An inefficient imaging scheduling process resulted in complaints by patients and physician offices. Further, the hospital experienced a high percentage of authorization and medical necessity write-offs due to incomplete information required for a test. A team was convened that included quality, imaging, central scheduling, admissions, information services, financial services and physician offices, as well as the chief operating officer as the executive champion. Using Lean Six Sigma, the team:

- developed screens within the scheduling system to identify and track missing data requirements;
- developed and distributed to all physician offices and admissions an imaging order guide to reduce errors when ordering tests;
- added current procedural terminology codes to the scheduling system to make it easier to locate the correct test;
- increased scheduling staff based on industry standards; and
- implemented role-based functions.

OUTCOMES ACHIEVED

- Calls abandoned decreased by 67% from a baseline of 8.4% (November 2018 to March 2019) to 2.8% (second to fourth quarter 2019).
- Medical necessity write-offs decreased by 51%, from $18,472 (Q4 2018) to $9,061 (Q4 2019).
- Authorization write-offs decreased by 72%, from $80,710 (Q4 2018) to $22,925 (Q4 2019).

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The Little Hospital That Could — Implementing a Sustainability Model to Continue Serving the Healthcare Needs of Our Community

Eastern Niagara Hospital, Lockport

EXECUTIVE SUMMARY

Small community hospitals throughout the county are experiencing financial difficulties and closing on a regular basis. Despite efforts to design a sustainability model, Eastern Niagara Hospital had no choice but to file for Chapter 11 bankruptcy protection in order to serve its community. ENH's goal was to develop and implement a sustainability model to continue to provide healthcare services to the community. The objectives were to analyze each department and service line for opportunities to "right-size" the hospital based on service utilization. ENH's action plan, based on these analyses, incorporated an ISO 9001:2015 risk-based approach and used the Plan-Do-Study-Act improvement methodology.

OUTCOMES ACHIEVED

- ENH achieved financial viability by reducing service lines.
- The hospital was able to continue to provide high-quality, safe patient care.
- ENH maintained a positive patient experience as evidenced by its Rate the Hospital 9-10 score.

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Old School: Schooling Staff About Patient Experience

Finger Lakes Health – Geneva General Hospital

EXECUTIVE SUMMARY

Trying to improve patient experience isn't new, but it's critically important to building patient loyalty. After looking at its patient experience data, Geneva General Hospital realized that it needed to refresh and renew its efforts. Over the years, organizational priorities in patient safety and quality of care had shifted the hospital's focus away from improving the patient experience. New hires throughout the organization meant that there were many staff members who hadn't received education on how their roles impact patient experience. The hospital became "old school" again and went back to basics to ensure the staff saw patient experience as a priority. The goal was to use proven methods and some creativity to energize and educate staff. Staff and providers got excited about this important work. The hospital employed creative strategies, such as a viral video contest, to appeal to the modern interests of staff. It worked and Geneva's patient experience scores have improved dramatically.

OUTCOMES ACHIEVED

- Overall rating scores for the health system increased from 63.0 to 70.2 over 12 months.
- All staff receive education on patient experience upon orientation and annually thereafter.
- On a weekly basis, administrative leaders round on patients with patient experience team members.

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Nurse-driven Rapid Response Team

Kaleida Health, Buffalo

EXECUTIVE SUMMARY

Kaleida Health recognized the need for a response team that had critical care experience and could respond to medical emergencies throughout the facility; also, the need for a means to record and track medical emergency data. To address these needs, Kaleida's goal was to develop a team that responded to changes in patient condition and elevated care to a higher level, as necessary. Objectives included branching the team out to include early intervention and assessment of stroke, STEMI and sepsis, thereby decreasing morbidity and mortality. Methods utilized included:

- establishing a protocol, policy and competency for the rapid response team;
- bringing in key stakeholders to collaborate with the team;
- having the team present and involved in hospital committees;
- pairing with clinical education on mock code training and using the data to modify the teaching plan; and
- tracking the data and modifying the needs to improve patient outcomes.

OUTCOMES ACHIEVED

- Medical emergencies outside the intensive care unit decreased.
- Communication and collaboration with bedside staff and providers improved.
- Mortality rates decreased.

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Emergency Department Patient Experience Transformation

Long Island Community Hospital, Patchogue

EXECUTIVE SUMMARY

Patient satisfaction is a vital component of Long Island Community Hospital's commitment to being the healthcare provider of choice for its community. To sustain that commitment, the hospital identified the emergency department, which sees more than 65,626 patients a year with 11,795 admissions, as an area where improved service and patient flow would have the greatest impact on patient satisfaction. The hospital partnered with Press Ganey to identify potential dissatisfaction and throughput issues, then formed a collaborative task force, including professional staff, the emergency department and nursing and patient experience teams, to institute direct bedding in the ED. This multidisciplinary initiative has significantly decreased door-to-care time and improved the quality of care by reducing the time it takes for a patient to see a physician.

OUTCOMES ACHIEVED

- Door-to-bed time decreased from 30 minutes to six minutes.
- Door-to-physician time decreased from 41 minutes to 20 minutes.
- Overall ED wait time decreased 50%.

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Choosing Wisely Campaign: Don't Draw Blood Daily

NYC Health + Hospitals/North Central Bronx

EXECUTIVE SUMMARY

The goal of this project was to broaden provider-based education on and awareness of high-value care, and further the practice of evidence-based, high-quality care for patients. The aim was to decrease utilization of routine labs (CBC, chemistry, magnesium and phosphorus) by 25% from February 2019 to July 2019. Once the team decided that it wanted to focus within high-value care, multiple Plan-Do-Study-Act cycles of education and feedback were conducted.

OUTCOMES ACHIEVED

- Labs/patient days were measured and broken down by lab type.
- Patient satisfaction increased.
- The organization enhanced return on investment.

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CREST: The Case Review and Escalation Support Team

NYU Langone Health, New York City

EXECUTIVE SUMMARY

Patients at the end of life have complex needs often requiring rapid interdisciplinary communication and decision-making across departments and specialties. Indecision or conflict between providers or between providers and families can lead to interventions that put the patient at increased risk of harm and may not be medically appropriate. NYU Langone Health created a Case Review and Escalation Support Team to facilitate real-time communication between services and to provide institutional support to medical and surgical teams in making critical treatment decisions for this at-risk population of patients across the health system. CREST allows any team member to rapidly escalate concerns about provider-provider or provider-patient/family conflict and non-value-added care in EOL patients. CREST rapidly reviews the case and issues a binding decision regarding the point of indecision or conflict, usually within three hours.

OUTCOMES ACHIEVED

- CREST consulted on 61 patients in 16 months on questions such as percutaneous endoscopic gastrostomy, procedures and level of care.
- CREST consults were resolved with a median time between consult order and final note of 2.8 hours.
- Surveys showed 100% of physicians would use CREST again and 90% felt supported.

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Improvements Achieved with a Cooperative Clinical Progression Program: Reduced Length of Stay, Improved Throughput and Enhanced Patient Experience

Saint Francis Hospital – The Heart Center, Huntington

EXECUTIVE SUMMARY

Saint Francis Hospital — The Heart Center identified capacity constraint as the greatest barrier to reaching organizational goals. Bed shortages resulted in congestion in the emergency department and procedural areas, which led to patient dissatisfaction. Transfers from intensive care units to lower levels of care were delayed. Capacity was a barrier to addressing the needs of the community and the mission and values of the organization. The goal of the Clinical Progression Program is to improve patient throughput by using an evidence-based, interdisciplinary approach. The interdisciplinary and collaborative care team works to ensure timeliness of care, identify and resolve barriers to clinical progress and prepare patients and families for discharge.

OUTCOMES ACHIEVED

- A length of stay reduction from 5.94 to 4.93 days was sustained over 24 months.
- Emergency department door-to-floor times decreased during a period of increased patient volume.
- Patient experience scores improved.

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Improving Patient Experience through the Conceptualization and Application of an Organizational Aspirational Declaration at a Safety Net Academic Medical Center

The Brooklyn Hospital Center

EXECUTIVE SUMMARY

In May 2017, the patient experience committee at The Brooklyn Hospital Center, a safety net academic medical center, assembled an interprofessional team that developed "The Heart of Connection." This four-page, written declaration was adopted as the hospital's aspiration for creating an extraordinary positive patient and staff experience. The declaration was operationalized into its many components through key high-priority teams. After each team identified and developed specific standardized communication guidelines for its unique touchpoints, the teams went through a training process using simulation and live environment coaching. They completed their initial training in December 2017 and then served as trainers and role models for the ongoing education and training of all department personnel in their respective disciplines.

OUTCOMES ACHIEVED

- Patient satisfaction nurse communication domain top box scores increased from 62.6 in the first quarter of 2018 to 71.0 in Q2 of 2019.
- Doctor communication domain top box scores increased from 73.7 in Q1 2018 to 78.8 in Q1 2019.
- Since December 2019, the hospital has moved up a domain star in nurse communication and doctor communication.

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Teamwork at the Heart of Optimizing Patient Experience

The Mount Sinai Hospital, New York City

EXECUTIVE SUMMARY

The Mount Sinai Hospital is a 1,170-bed tertiary care teaching hospital located in New York City. Mount Sinai Heart, a cardiac service line within The Mount Sinai Hospital, is an international leader in the management and diagnosis of heart disease. Nevertheless, innovative strategies were necessary to improve the patient experience. As a large and diverse service line, siloed teams had a negative impact on communication and care coordination. As Mount Sinai reinvigorated its patient experience journey, leadership pursued The Joint Commission's Comprehensive Cardiac Center Certification. The certification's standards facilitated improvement in patient-centered care and teamwork across disciplines, which culminated in the improvement of patient satisfaction data. Strategies implemented to align communication and collaboration among disciplines included the creation of an interdisciplinary policy committee and utilization of a Lean/A3 framework to provide structure to and documentation of continuous improvement efforts.

OUTCOMES ACHIEVED

- The hospital's top box rating score for cardiology improved from 72.6% in Q1 2018 to 84.1% in Q1 2019.
- Mount Sinai became the fourth hospital in the United States and first hospital on the East Coast to achieve The Joint Commission's Comprehensive Cardiac Center Certification.
- The hospital used Lean methodology to streamline processes to further enhance patient experience.

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Women's Health: Integration of the Midwifery Delivery Care Model — How Cultural Transformation Can Drive Change, Enhance the Patient Experience and Improve Outcomes

The Saratoga Hospital, Saratoga Springs

EXECUTIVE SUMMARY

Moving from a purely medical model of care to an integrated model incorporating midwifery into obstetrical care was a cultural transformation as it involved many practice changes. This transformation took place over a five-year period and was successful due to the unwavering commitment of a team of advanced practice nurses, medical team members and hospital leadership. In 2014, hospital-employed midwives were not available to patients preparing to deliver, with 30% of all deliveries as primary cesarean sections and a 24% episiotomy rate. The Saratoga Hospital began its program with just three midwives and a dedicated advanced practice director of nursing. Using change management principles and methods, including Kotter's change management model, the team slowly advanced the program to full implementation. To date, there are six nurse midwives and a fully integrated program, with 85% of vaginal births attended by midwives.

OUTCOMES ACHIEVED

- The hospital achieved a 24.1% reduction in the primary cesarean rate, from 17.4% in 2014 to 13.2% in 2019.
- The episiotomy rate decreased by 76.8%, from 18.1% in 2014 to 4.2% in 2019.
- The number of midwife-attended births grew by 85% from 2014 to 2019.

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Caring for Patients Where They Are: The United Health Services Virtual Walk-in

United Health Services, Vestal

EXECUTIVE SUMMARY

The availability of direct-to-consumer telehealth has increased within New York state over the past several years and is often provided by independent third-party organizations. United Health Services founded its telehealth/virtual health program on the belief that existing health systems need to be innovative to increase patient access to services by caring for patients where they are. As an integrated healthcare system serving urban, suburban and rural communities, UHS needs to provide equitable care despite the social determinants of health that affect its diverse patient population. UHS also needs its providers and workforce to have the skills necessary to provide care within changing models of healthcare delivery. Driven by its values of compassion, trust, respect, teamwork and innovation, the UHS Virtual Walk-in was established — the first nationally-accredited consumer-to-provider telehealth program developed by an existing integrated healthcare delivery system.

OUTCOMES ACHIEVED

- The health system delivered virtual health to its community in a way that increased patient access and health equity.
- UHS maintained high standards of care in the delivery of virtual health by existing providers.
- The health system achieved national accreditation for consumer-to-provider telehealth to demonstrate model practices.

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Hospital Engages Prenatal Practice Team Members to Achieve Aggressive Goal: Baby-Friendly Designation in 2019

Unity Hospital, Rochester

EXECUTIVE SUMMARY

Breastfeeding is supported overwhelmingly in the research literature for its exceptional nutrition, for its immunological benefits and as one of the most powerful impediments to infant morbidity. In October 2018, Unity Hospital's breastfeeding initiation rate was 79%, which was below the Healthy People 2020 goal of 81.9% and the Baby-Friendly goal of 80%. As a result, Unity formed a multidisciplinary task force to implement Ten Steps to Successful Breastfeeding with the aims of meeting or exceeding its breastfeeding initiation goal of 80% and achieving Baby-Friendly designation in 2019. As part of the project, Unity:

- conducted a gap analysis;
- formed a governance structure, including a project leadership steering committee and a prenatal practice workgroup (continuity of care subcommittee);
- conducted quality improvement Define, Measure, Analyze, Improve and Control workshops to, as a team, identify the biggest challenges and create and implement interventions; and
- agreed on the following measures for success: breastfeeding initiation rates, patient education results and third trimester breastfeeding visits.

OUTCOMES ACHIEVED

- Breastfeeding initiation rates increased 9.14% between October 2018 and December 2019.
- Unity created a standard prenatal patient breastfeeding education program to be used across all of its prenatal practices.
- Baby-Friendly designation was achieved in 2019.

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Utilizing Digital Health Technology to Collect the Patient VOICE: Validated Outcomes in the Clinical Experience

UR Medicine, Rochester

EXECUTIVE SUMMARY

In 2013, clinical leaders at the University of Rochester Medical Center identified an opportunity to enhance the patient experience by including the patient's voice when assessing treatment outcomes. Stakeholders, including providers, administrators and representatives from information technology, united to improve the process of clinical collection of patient-reported outcomes. Choosing a generic patient-reported outcome system that could be used across the enterprise, along with the development of novel software that works within the existing electronic medical record (UR VOICE: Validated Outcomes in the Clinical Experience), led to an innovative collection platform that efficiently and effectively quantifies the physical, mental and social health of the patient. PRO scores can be viewed immediately during the clinic encounter and be used for shared decision making and increased patient engagement.

OUTCOMES ACHIEVED

- UR VOICE has collected over 2.6 million PRO scores for more than 250,000 unique patients.
- What started in one outpatient clinic has now spread to 80 departments across the enterprise.
- Clinicians have a new "vital sign" to create a comprehensive picture of a patient's health.

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Establishing a Strong Existence in the Healthcare Industry — Becoming a Viable Consumer of Choice for Your Patients

White Plains Hospital

EXECUTIVE SUMMARY

Organizations are often trying to make a meaningful impact on the patient experience, including by creating high-reliability tactics for many facets of daily operations. White Plains Hospital saw an opportunity to improve a consistent nurse leader rounding process, accurate tracking, service recovery identification and reporting methods given that its 2017 patient satisfaction scores were below the 75th percentile in four of the nine domains: communication about medications, communication with doctors, care transitions and the hospital environment. After the implementation of medication side-effect cards, as well as an electronic nurse leader rounds tool that mimics the Hospital Consumer Assessment of Healthcare Providers and Systems questions, the hospital's scores increased above the 75th percentile in six of the nine domains.

OUTCOMES ACHIEVED

- The hospital's ranking in the "communication about medications" domain went from the 41st percentile in 2017 to the 74th percentile.
- Its ranking in the "care transition" domain for the pilot unit went from the 56th percentile in 2017 to the 83rd.
- Organizational implementation of the electronic NLR tool brought the hospital's ranking in seven of the nine domains above the 70th percentile.

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Chapter 3:

Culture and Leadership

Patient Safety

Unsolved Mystery: Medication History

Buffalo General Medical Center/Gates Vascular Institute

EXECUTIVE SUMMARY

According to the Institute of Medicine's "Preventing Medication Errors" report, a hospitalized patient is subject to at least one medication error per day during their stay. More than 40% of these errors are the result of inadequate medication reconciliation and about 20% of these errors may result in patient harm. In 2018, Buffalo General Medical Center set out to address the growing concern around medication errors reported to its internal patient safety committee. The root cause of the vast majority of errors results from inaccurate medication histories. After a thorough evaluation with its leadership team, BGMC decided to task the pharmacy department with designing a pilot Medication History Program with medication history specialists. The program's main focus was the patients admitted via the emergency department, as this was the area where that saw the highest internal audit error rate. The goal was to design a program to identify and address errors as soon as possible in the hospital admission.

OUTCOMES ACHIEVED

- Medication history specialists identified medication history errors in 97% of patients reviewed.
- The average number of medication history errors per patient was 6.7: 44% omitted, 36% incorrect details and 20% missing medications.
- Medication history specialists can reduce direct costs per case.

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Ligature Risk Mitigation Patient Safety Initiative

Mohawk Valley Health System – Faxton St. Luke's Healthcare and St. Elizabeth Medical Center, Utica

EXECUTIVE SUMMARY

In the United States, 49 to 65 patient suicides are reported annually in acute care hospitals, with 70% by hanging. A multidisciplinary ligature risk mitigation team performed a safety risk assessment in the emergency department, psychiatric unit, intensive care unit and medical/surgical units. The identified ligature risks were eliminated, which provided a safer environment organization-wide. Since the environment will never be 100% ligature-risk free, the Columbia-Suicide Severity Rating Scale was implemented to screen patients, identify suicidal patients and provide those patients with sitters to ensure their safety. All staff received education focusing on risks and interventions. This initiative to mitigate risk and ensure patient safety and care cost the organization approximately $100,000.

OUTCOMES ACHIEVED

- An assessment tool was developed to identify ligature risks and develop mitigation plans.
- Hospital assessment and the DNV-GL Healthcare Survey identified that ligature risks were eliminated.
- The use of the Columbia-Suicide Severity Rating Scale was implemented to identify patients at risk for suicide.

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Employing New Enhanced Recovery Goals for Bariatric Surgery

Mohawk Valley Health System – Faxton St. Luke's Campus, Utica

EXECUTIVE SUMMARY

Mohawk Valley Health System's bariatric surgery program was identified as a high outlier by the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program/College of Surgeons. Enhanced recovery after surgery protocols include multimodal perioperative care pathways designed to help patients recover early after surgery by maintaining preoperative organ function and reducing physiologic stress response following surgery. Besides improving patient outcomes, these protocols have been shown to reduce length of stay and healthcare costs. The goals of this initiative were to reduce and maintain LOS, extended LOS (less than four days), complications and readmissions.

OUTCOMES ACHIEVED

- The team was successful in reducing and sustaining LOS (1.637 to 1.5066 days).
- The complication rate remained stable and low at 0.022.
- Readmissions for 14 days/30 days remained stable; there was no increase in readmissions as patients left sooner.

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Standardizing Levels of Observation to Promote Patient Safety and Enhance Communication with Interdisciplinary Team

NewYork-Presbyterian Hudson Valley Hospital, Cortlandt Manor

EXECUTIVE SUMMARY

With the implementation of a new level of observation policy, patients who require observation are now assigned to an appropriate caregiver. With the assignment of patient care technicians rather than security guards as observers of non-violent, suicidal patients, a need arose for more PCTs. Six additional PCT positions were approved by hospital leadership. Clinical nurse input resulted in the creation of new communication forms that ensure a safer handoff of the patient. The "request for observation" form promotes better communication between the staff and leadership regarding the need for a sitter. New electronic forms for clinical nurse documentation during the period of observation permit stakeholders to assess the patient's needs. The appropriate assignment of role of observer has resulted in less security watch hours. Security guards are now called upon appropriately to manage those patients with behavioral or violent behavior. With this initiative the patients in the hospital's care receive the appropriate level of observation.

OUTCOMES ACHIEVED

- The hospital implemented a level of observation policy to distinguish between a patient confused and/or nonviolent.
- A process for hand-off communication between caregivers of patients under observation was developed.
- The hospital created an education program for stakeholders and monitored completion compliance.

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2020 HONOREE

Implementation of a Centralized Mortality Review Process across a Large Integrated Healthcare Organization

Northwell Health, New Hyde Park

EXECUTIVE SUMMARY

Mortality review is a highly variable process among healthcare organizations. Disparate MR processes, independent, site-specific findings and lack of consistent data across the organization's diverse, acute care hospitals limited its ability to aggregate findings, analyze patterns and trends, identify opportunities for improvement and measure outcomes. As a result, leadership made a commitment to establish a uniform MR process consistent with the organizational priority to eliminate all preventable mortality. The two-tiered process developed consists of a centralized first level review conducted by a team of patient safety registered nurses followed by a detailed second level physician review for cases meeting objective criteria for referral to a hospital-based physician. A uniform MR tool was developed, as well as a standardized education program for physicians conducting second level reviews. A central, interactive database was developed to ensure data and reporting consistency.

OUTCOMES ACHIEVED

- The potentially preventable death rate decreased 38.0%.
- Adverse events (not necessarily related to mortality) decreased by 21.0%.
- Opioid-related events (not necessarily related to mortality) decreased 31.7%.

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Promoting Patient Safety: Leveraging Stakeholders' Engagement to Reduce Catheter-associated Urinary Tract Infections

Northwell Health – North Shore University Hospital, Manhasset

EXECUTIVE SUMMARY

Urinary tract infections are among the most common healthcare-associated infections, and approximately 75% are associated with the utilization of urinary catheters. Preventing catheter-associated urinary tract infections is a top priority for hospitals. It is a quality metric that is tracked on the organizational quality dashboard and shared widely with stakeholders. In response to an unexpected increase in infections in early 2018, North Shore University Hospital implemented a "1-2-3 Model" to promote accountability and engagement in achieving organizational goals. North Shore's CAUTI task force, quality council and a highly engaged team of CAUTI champions worked collaboratively to implement an action plan that revitalized evidence-based prevention protocols and introduced new practices to drive quality outcomes and enhance sustainability. Learning opportunities and experiences were designed for leaders and frontline staff, which further advanced the potential of this team.

OUTCOMES ACHIEVED

- Intensive care unit CAUTIs decreased by 75% from 2018 to 2019.
- Non-ICU CAUTIs decreased 44% from 2018 to 2019.
- ICU urinary catheter device days decreased 9% and non-ICU urinary catheter device days decreased 14%.

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Standardized Multidisciplinary Rounds Improve Quality and Safety on the Medicine Service

NYU Langone Hospital-Brooklyn

EXECUTIVE SUMMARY

NYU Langone Hospital-Brooklyn's prior multidisciplinary rounds lacked detailed discussions on quality and safety concerns and focused solely on discharge planning. This led to a higher number of catheter-associated infections, medication errors and hospital-acquired conditions. The hospital aimed to standardize multidisciplinary rounds and discuss catheters/lines, pressure injuries and safety medications, among other important items. The team used the Plan-Do-Study-Act method to formulate a patient dashboard to be displayed on large, unit-based screens. Rounding time was reduced when the patient information was displayed and scripts to facilitate discussions around foleys, central lines, pressure injuries, alert medications and the need for advance care planning were provided. Surveys were sent to unit leaders to evaluate the quality of the rounds. Outcomes related to catheter-associated infections, hospital-acquired pressure injuries and medication-related adverse events were monitored and found to be significantly reduced.

OUTCOMES ACHIEVED

- The number of catheter-associated urinary tract infections and hospital-acquired pressure injuries was reduced.
- The number of medication-related adverse events decreased.
- Advance care planning was improved by using rounds to identify patients with high mortality risk.

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Automated Dispensing Cabinet Management as an Efficiency and Cost-savings Initiative

Olean General Hospital

EXECUTIVE SUMMARY

Olean General Hospital determined that the value of the medication inventory in its automated dispensing cabinets had increased roughly 10% between January 2017 and January 2018. The hospital created teams that were assigned to examine a set of automated dispensing cabinets. The teams identified essential medications and unloaded all non-essential medications without an active order. Daily reports indicate which medications have been loaded for greater than 30 days without being dispensed and can be removed automatically, and prompt the pharmacy technicians to complete this task as part of their workflow. This process was maintained for one year and resulted in a savings of $31,542.29.

OUTCOMES ACHIEVED

- Olean General realized more than $30,000 in cost savings by decreasing ADC medication inventory.
- Nurses spend less time placing stock-out requests due to outdated medications.
- Pharmacy technician efficiency increased by combining multiple tasks in a single ADC interaction.

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A Change of Culture: Reducing Blood Culture Contamination in the Emergency Department

St. Francis Hospital – The Heart Center, Roslyn

EXECUTIVE SUMMARY

Blood culture contamination increases costs due to the need to redraw specimens, inconveniences patients who must return for repeat cultures and results in inpatients being kept on broad spectrum antimicrobials for longer than necessary. To prevent these issues, nurses in St. Francis Hospital – The Heart Center's emergency department sought to reduce the blood culture contamination rate by first introducing a second skin preparation with glove change. When this improved the contamination rate but did not result in meeting the nurses' goal, they implemented a second change, which was to stop drawing blood at the same time and from the same site as IV insertion. From a high of 5.7% in September 2017, the ED nursing practice change initiative achieved and sustained a contamination rate of less than 1% by July 2019. The results achieved with the second intervention demonstrate the success of the Plan-Do-Study-Act quality improvement method.

OUTCOMES ACHIEVED

- Contamination rates decreased from 5.7% in September 2017 to less than 1% in July 2019.
- Drawing blood for culture separately from the IV start was instrumental in reaching goals.
- Collaboration and monitoring outcomes drove continued improvement.

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Improving Patient Outcomes through Heightened Focus on Patient Safety Indicators

The Mount Sinai Hospital, New York City

EXECUTIVE SUMMARY

The Mount Sinai Hospital is a 1,170-bed tertiary care teaching hospital located in New York City. Mount Sinai's office of excellence in patient care leads a quality improvement initiative targeted at minimizing risk to patients and improving care by tracking, trending, providing feedback on and engaging clinical departments vis-à-vis Patient Safety Indicators identified as potentially problematic. Since 2015, using a root cause analysis-inspired methodology, all PSIs have undergone a coding and clinical review using PSI-specific review tools designed to solicit discrete data used for analysis and trend identification. Tools are modified as needed to refine data collected. The objective of the review is to determine the validity and root cause, and target improvement. Each review is sent to designated clinical department champions and physician stakeholders. The data are compiled and analyzed for any trends, and root causes are addressed at the department level.

OUTCOMES ACHIEVED

- From January 2014 through June 2019 the rate of PSI cases observed decreased by 48.97%.
- The total number of PSI cases observed decreased by 63.96%.
- Improvement in documentation practices further decreased PSI rates.

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Chapter 4:
Capacity and Patient Flow

Comprehensive and Collaborative Neurosciences

Crouse Health, Syracuse

EXECUTIVE SUMMARY

The goal of this project was to create a comprehensive and collaborative neuroscience program at a small community hospital providing the highest level of care at both state and local levels. The objectives were to achieve and maintain Det Norske Veritas/New York State Department of Health Comprehensive Status, achieve and maintain American Heart Association/American Stroke Association Get With the Guidelines Stroke Elite Plus status across all platforms, promote collaborative medicine models across all platforms and advance technology and education initiatives. Crouse used creative strategic initiatives, force multiplication models with advance practice clinicians and open communication lines to drive program development.

OUTCOMES ACHIEVED

- Crouse achieved DNV/DOH Comprehensive Status.
- The hospital earned AHA/ASA GWTG Target: Stroke Elite Plus award status.
- Crouse created a neuroscience service line.

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Pit Stop

John R. Oishei Children's Hospital/Kaleida Health, Buffalo

EXECUTIVE SUMMARY

Moving a patient from the labor floor to the operating room for an emergency cesarean birth is a critical, complex process with many variable responsibilities and tasks. To decrease the time from "the decision to the incision" for emergency cesarean deliveries, the team implemented a process modeled after a high-speed racing pit stop where each individual had clearly defined roles and responsibilities. The team used Plan-Do-Study-Act cycles in weekly simulation drills to improve communication, the team dynamic and the perceived comfort and control of these fast-paced, high-stress situations.

OUTCOMES ACHIEVED

- Perception of performance, communication and team dynamics improved.
- Transitions to the operating room for STAT c-sections are smoother.
- The time from decision to incision decreased.

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A Combined Pediatric Emergency Department and Observation Unit Provides Acute and Ongoing Care to Children

Mount Sinai Beth Israel, New York City

EXECUTIVE SUMMARY

As part of the transformation of Mount Sinai Beth Israel, the development of a combined pediatric emergency department and short-stay unit serves multiple aims — to provide child-centered care to families in a traditionally underserved community while providing support services to other hospitals without pediatric acute and inpatient services. The PED-SSU is the New York City region's only observation unit designed for the ongoing management of children for a period of up to 48 hours. The combined unit manages the challenges of limited bed capacity in emergency departments and inpatient units and maximizes efficiency, quality and safety. Using a hub-and-spoke model, Mount Sinai Beth Israel also leveraged telemedicine resources to provide consultations to other hospitals and extend pediatric subspecialty care across the health system. By tracking patient outcomes, the data-driven, evidence-based process ensures that care is safe, family-centered and consistent with current medical literature.

OUTCOMES ACHIEVED

- Up to 69.7% of children requiring admission were treated in the SSU; only 15.3% required conversion.
- Plan-Do-Study-Act cycles increased admission rates and decreased intensive care unit admissions for children with severe asthma.
- Patient experience scores on Press Ganey increased from the 36th to 92nd percentile over one year.

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Introduction of a Thrombectomy Program

Mount Sinai Queens, Astoria

EXECUTIVE SUMMARY

Due to a rapidly aging population in Mount Sinai Queens' neighborhood, there is an anticipated increase in the community prevalence of stroke. Based on the wide acceptance of thrombectomy as the best practice treatment for acute ischemic stroke, Mount Sinai Queens chose to implement a thrombectomy program in its interventional radiology suite, while simultaneously constructing a specialized stroke center to accommodate the community's needs for timely treatment for stroke. To successfully implement a new clinical procedure that was unfamiliar to existing emergency and ancillary staff, the hospital used multiple Institute for Healthcare Improvement best practices to anticipate process vulnerabilities and standardize workflows.

OUTCOMES ACHIEVED

- The hospital performed 45 thrombectomies onsite in 2019 with overall positive outcomes.
- The IHI Model for Improvement methods were disseminated and used.
- Staff are now familiar and comfortable with a new clinical procedure.

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Impact of Culture Change on Reducing Unplanned Readmissions

St. Catherine of Siena Medical Center, Melville

EXECUTIVE SUMMARY

The CMS Hospital Value-based Purchasing Program rewards hospitals with incentive payments for quality of care provided. Hospitals are encouraged to improve quality, efficiency, safety and the patient experience of Medicare beneficiaries. In 2014, St. Catherine of Siena Medical Center had a readmission rate greater than 29% for congestive heart failure patients, which was above the national average of 23%. In 2015, the facility was assessed a $824,300 penalty. The goal to reduce CHF readmissions using a Plan-Do-Study-Act approach was a multi-year journey. The hospital expanded its Symptom Management and Supportive Care program and improved its medication reconciliation rate by adding dedicated pharmacists at critical admission and discharge points. In alignment with the vision and journey to high reliability, the organization achieved and sustained a CHF readmission rate below the national average through 2019.

OUTCOMES ACHIEVED

- Readmissions decreased by 44% and financial penalties were avoided.
- The medical center achieved a 33% increase in SM&SC program volume.
- Medication reconciliation and patient education compliance increased.

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Reducing Length of Stay by Increasing Face-to-Face Communication on a Hospital Medicine Unit

URMC – Highland Hospital, Rochester

EXECUTIVE SUMMARY

Communication among team members within hospitals is a complex and dynamic process. At Highland Hospital, environmental barriers to effective communication include competition for time and attention in different areas of the hospital, organizational complexity and power relationships. The purpose of this initiative was to implement a variety of initiatives to increase face-to-face communication between nurses and physicians on one medical unit and thereby decrease length of stay. Data were gathered from a 39-bed general medicine unit before and after the implementation of three interventions: a location-based hospitalist and advanced practice provider team assignment, bedside rounding and a daily interdisciplinary huddle. Length of stay and discharges before noon were measured, face-to-face communication data were collected by polling the nurses and interdisciplinary huddle compliance was measured. Improvement was seen after implementing the interventions.

OUTCOMES ACHIEVED

- Mean LOS decreased by 1.1 days post implementation (7.7 versus 6.6) and median LOS decreased by nine hours.
- Ninety-three percent of nurses post implementation felt they made contributions to the plan of care versus 12% pre implementation.
- The number of pages received by advanced practice providers decreased by 51%.

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Interdisciplinary Approach to Length-of-stay Reduction

White Plains Hospital

EXECUTIVE SUMMARY

White Plains Hospital is challenged with capacity management due to an increase in patient volume. The length of stay steering committee was tasked with developing strategies to reduce LOS while maintaining the patient experience, reducing errors and driving efficiency through innovation. This required the examination of many key components throughout the organization that affected LOS. The ultimate goal was to decrease inpatient LOS and emergency department LOS. Workgroups were developed around various initiatives: ED throughput — throughput coordinator role, inpatient throughput — enhanced bedside shift report, multidisciplinary rounds, team discharge rounds, discharge lounge service, unit-based hospitalist program, 11 a.m. discharge delay reviews and high-risk LOS rounds. Significant changes to multiple workflows were implemented through a collaborative process. This led to standardization of processes, including automation and technological support to help share essential metrics and data to keep the team focused on goals.

OUTCOMES ACHIEVED

- Emergency department LOS time from reception to inpatient unit decreased from 314 minutes to 282 minutes.
- Inpatient LOS decreased from 4.32 to 4.19 days, resulting in 11 extra available beds per day or an additional 775 admissions.
- The percentage of patients discharged by 11 a.m. increased from 7.7% to 18.5%.

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Chapter 5:

Healthcare-associated Conditions

Infections

A Pharmacy-led Anticoagulation Initiative Lowered PSI 12 Incidence by 40% Using Evidence-based CPOE

Albany Medical Center

EXECUTIVE SUMMARY

Venous thromboembolism occurs in a small proportion of hospital surgical patients, but greatly increases costs and is often fatal. Because most perioperative VTE can be prevented, VTE incidence is considered a marker of overall hospital quality and safety. In 2017, Albany Medical Center recognized an opportunity to decrease the rate of VTE incidence among surgical inpatients. To address this, AMC designed a multi-dimensional patient safety initiative that incorporates electronic best-practice tools for VTE education, risk assessment and hierarchical medical prophylaxis into the hospital's perioperative clinical pathways. An innovative feature of the initiative is that it is led by the pharmacy department and delegates decision-making authority to pharmacists. Over a two-year period, this initiative reduced VTE incidence by about 40% (from 6.0 to 3.9 cases/1,000 and from O/E rate = 1.51 to 0.96) thereby demonstrating the utility of pharmacist-led anticoagulation programs to dramatically reduce hospital VTE rates.

OUTCOMES ACHIEVED

- A pharmacist-led anticoagulation program was developed and implemented.
- Evidence-based guidelines and best practices were incorporated into AMC's VTE prevention program.
- Venous thromboembolism incidence was reduced by about 40% hospital-wide.

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Reduction in CLABSI Incidence by Implementation of a Hospital-wide Nursing Care Bundle

Albany Medical Center

EXECUTIVE SUMMARY

Central line-associated bloodstream infection is a cause of hospital-associated patient harm and greatly inflates costs. In 2017, an analysis of data revealed an opportunity to reduce central line-associated bloodstream infection incidence in several units of Albany Medical Center hospital. To address this, AMC used a Lean process evaluation exercise and reactive root cause analyses to identify deviations from aseptic catheter dressing care as a common factor in CLABSI cases. AMC then initiated a multi-component process improvement initiative, directed by physician, nurse and senior leadership CLABSI champions, that used intensive education, nursing competency testing, universal adoption of a novel modular central venous line dressing kit and data analytic compliance-tracking to reduce CLABSI in both intensive care units and medical/surgical wards by approximately 70% over the next two years. With this initiative, the hospital has gone 18 months and 2,427 CVL days without a single CLABSI in the medical intensive care or pediatric intensive care units. AMC believes its experience can serve as a model for CLABSI reduction at other hospitals.

OUTCOMES ACHIEVED

- CLABSI incidence was reduced hospital-wide.
- AMC adopted and validated a new nursing care bundle effective in reducing CLABSI.
- The entire nursing workforce was trained in the new infection prevention procedures.

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Strategies to Reduce Surgical Site Infections

Brooks–TLC Hospital System, Inc., Dunkirk

EXECUTIVE SUMMARY

A team approach using the root cause analysis tool was initiated to reduce the incidence of surgical site infections after an increase in these infections was identified in 2017. The goal is always zero SSIs, but there are many facets that make it an ongoing collaborative effort. Improvement initiatives must have buy-in from surgeons and can be hardwired and sustained with ongoing follow-up, including education and auditing.

OUTCOMES ACHIEVED

- The SSI rate decreased from 0.37 to 0.04 per 100 procedures.
- RCA encouraged valuable staff input in order to improve processes.
- The team worked collaboratively to focus on SSI prevention.

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Decreasing Vascular Site Infections

Catholic Health System of Buffalo – Sisters of Charity Hospital

EXECUTIVE SUMMARY

In 2018, Sisters of Charity Hospital had a total of 23 vascular site infections, and the hospital was determined to decrease that number in 2019. Sisters of Charity recognized 17 out of the 23 infections occurred after discharge — so that is where the team focused. The hospital created vascular discharge kits containing disposable items that allow the patient to keep the incision clean after discharge. Each patient is provided a kit and an instruction sheet at the time of discharge. The facility was able to decrease vascular site infections to seven in 2019.

OUTCOMES ACHIEVED

- Vascular site infections decreased 2.63%.
- Patient experience scores provided by vascular patients improved 2.4%.
- The initiative was able to be replicated in other service lines.

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Reducing Hospital-acquired Infections through Systemic Changes

Erie County Medical Center Corporation, Buffalo

EXECUTIVE SUMMARY

Hospital-acquired infections are a serious threat to patient safety, posing a preventable and costly risk to hospital operations and compromising quality patient care. To improve patient safety and quality of care and reduce costs associated with the most common HAIs, Erie County Medical Center developed an innovative and focused program in 2016 to decrease catheter and central line infections. By providing training, real-time data, post-infection debriefing and focused staff quality improvement conferences on the issues of HAIs, infections were reduced and lasting changes to clinical practice were effected.

OUTCOMES ACHIEVED

- Since 2016, ECMC has seen a 67.5% decrease in catheter-associated urinary tract infections and 72.7% decrease in central line-associated bloodstream infections.
- In 2018, the hospital incurred no penalties from HAIs, compared to $363,495 in penalties in 2017.
- The entire hospital has realized significant benefit from this inexpensive quality initiative.

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The Journey to ZERO Surgical Site Infections

Flushing Hospital Medical Center, MediSys Health Network, Jamaica

EXECUTIVE SUMMARY

In 2017, there were 15 surgical site infections at Flushing Hospital Medical Center: five colon, one hip prosthesis and nine abdominal hysterectomy SSIs. Aligned with the leadership's commitment to "zero harm," a multidisciplinary task force was convened with the objective of decreasing the number of SSIs. In December 2017, the facility implemented a colon surgery bundle consisting of evidence-based practices in each of the pre-operative, intra-operative and post-operative phases. The colon surgery bundles were then adapted and used with abdominal hysterectomy and hip prosthesis surgery.

OUTCOMES ACHIEVED

Through this initiative, Flushing Hospital Medical Center achieved:

- zero colon SSIs for > 21 months (five in 2017, one in 2018, zero in 2019);
- zero hip prosthesis SSIs for > 14 months (one in 2017, one in 2018, zero in 2019); and
- zero abdominal hysterectomy SSIs for > 13 months (9 in 2017, 5 in 2018, zero in 2019).

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Surgical Site Infection Reduction: Putting Patient Safety First

Glens Falls Hospital

EXECUTIVE SUMMARY

An initiative to reduce surgical site infections at Glens Falls Hospital trialed a pre-operative chlorhexidine gluconate with povidone iodine nasal decolonizing bathing set. The trial was a collaboration between surgeons, the executive suite, nursing and value analysis, quality, patient safety and infection prevention and control staff. The three-month trial resulted in a greater than 70% reduction in SSIs compared to the previous three months and was approved for hospital-wide implementation in November 2018. After implementation, SSIs were reduced by 55% by November 2019, which demonstrated statistical significance (T-Test P value = 0.019) and resulted in a net estimated cost burden avoidance of $95,471. Reducing the microbial burden of the skin via a skin antiseptic has demonstrated better clinical outcomes, reduced burden of cost and increased staff satisfaction.

OUTCOMES ACHIEVED

- Patient safety was enhanced through a sustained reduction in SSIs from 0.32 to 0.14 per 100 cases.
- Awareness of SSI prevention and outcomes increased with organization-wide implementation of evidence-based practices.
- Patient and staff satisfaction improved with the initiative and dedication to continuous improvement.

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Millard Fillmore Suburban Hospital CAUTI Reduction Program

Millard Fillmore Suburban Hospital, Williamsville

EXECUTIVE SUMMARY

An analysis of historical data revealed an opportunity to decrease in-catheter days and catheter-associated urinary tract infections. An interdisciplinary team reviewed root causes and developed several action plans to reduce risk. Through staff and provider education, nurse-driven policy and increased awareness, Millard Fillmore Suburban Hospital has remained free of CAUTIs for 200 days.

OUTCOMES ACHIEVED

Through this initiative, Millard Fillmore Suburban Hospital:

- reduced hospital-acquired infections;
- reduced overall catheter days; and
- increased a culture of safety.

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Impact of Universal Non-targeted Hepatitis C Screening

Mount Sinai Beth Israel, New York City

EXECUTIVE SUMMARY

Current hepatitis C screening recommendations from the Centers for Disease Control and Prevention call for testing adults born between 1945 and 1965 and individuals with HCV risk factors. Mount Sinai Beth Israel's program aims to show that non-targeted screening may be a more ideal approach in emergency departments. Patients aged 18 and older are offered testing by a registered nurse and those who decline testing are approached and educated by trained health educators who encourage test acceptance. Health educators are also responsible for linking patients to care.

OUTCOMES ACHIEVED

- In 12 months, the hospital identified 638 HCVAb RE and 214 VL+ patients out of the 10,630 screened in the ED.
- Seventy-four percent of patients were made aware of HCV diagnosis and 48% were linked to care.
- Of the 98 patients linked to care, 42 (43%) have achieved sustained virologic response.

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Central Line Blood Stream Infection Reduction — Medical Oncology

NewYork-Presbyterian Hospital, New York City

EXECUTIVE SUMMARY

Using a multidisciplinary approach to reduce central line-associated bloodstream infections on a surgical oncology unit resulted in zero CLABSIs since project implementation. This initiative has sustained the unit's improved outcomes pertaining to CLABSI. It required engagement and active participation by providers, nurse leadership, frontline nurses, quality improvement, infection control and intensive care unit technicians. This initiative resulted in reduced hospital costs, improved patient safety and alignment with the hospital's strategic plan of "zero harm."

OUTCOMES ACHIEVED

- The number of CLABSIs and the CLABSI rate decreased.
- Nursing staff were engaged in the process, which led to improved nursing quality care.
- Various disciplines were involved in the initiative, including nursing, providers, ICU technicians, infection control, leadership and quality.

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A Multidisciplinary Approach to CAUTI Reduction

NewYork-Presbyterian/Weill Cornell Medical Center, New York City

EXECUTIVE SUMMARY

NewYork-Presbyterian Weill Cornell began an initiative to reduce catheter-associated urinary tract infection rates in the neuro intensive care unit and step-down unit. The goals were to prioritize indwelling urinary catheter removal, improve interdisciplinary communication, increase knowledge and understanding of CAUTI prevention strategies and reduce overall CAUTI rates. Interventions included daily IUC rounds with evaluation of device necessity and maintenance techniques, CAUTI education and observation of IUC insertion practices. Rounds were performed with the patient care director, charge nurse, attending physician and infection prevention nurse. These rounds ensured that a plan for IUC removal was in place for every patient.

OUTCOMES ACHIEVED

- Utilization of IUCs and CAUTI incidence decreased dramatically after implementation of the initiative interventions.
- The multidisciplinary team reported improved collaboration and communication about IUC necessity.
- Unit culture has shifted; patients who require an IUC are seen as an exception rather than the norm.

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Curtailing the Occurence and Untoward Effects of Catheter-associated Urinary Tract Infections

NYC Health + Hospitals | Central Office

EXECUTIVE SUMMARY

The program's aim was to progressively reduce the system-wide catheter-associated urinary tract infection rate by 25% over a 12-month period. Over the past year, NYC Health + Hospitals has demonstrated a profoundly heightened awareness and focus on CAUTI prevention for a number of patient-related and organizational reasons. Perhaps one of the most important reasons for action is the significant, yet avoidable, health burden that CAUTIs impose on the patient population, which is dispersed across 11 acute care facilities. Patients who develop CAUTIs are at an increased risk of disease progression or sequelae to a more serious condition, such as pyelonephritis, bacteremia, meningitis, deep vein thrombosis, pneumonia or pressure injury. Furthermore, patients whose hospital courses are complicated by CAUTIs incur an increased length of stay, as well as a higher rate of morbidity and mortality.

OUTCOMES ACHIEVED

- The CAUTI count for all facilities decreased.
- The CAUTI rate per 1,000 catheter days was reduced.
- The urinary catheter device utilization ratio improved.

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A Collaborative Approach to CLABSI Reduction

NYC Health + Hospitals/Kings County, Brooklyn

EXECUTIVE SUMMARY

In 2018, there was an increase in central line-associated bloodstream infections in the neurosurgical and surgical intensive care units, D3N, at NYC Health + Hospitals/Kings County. The facility initiated a CLABSI reduction project with a goal to reduce the CLABSI rate by 50% by the end of 2019. In parallel to the improvement effort, the facility identified a subset of patients with CLABSI who were also on total parenteral nutrition. Through active interventions, NYC Health + Hospitals/Kings County attained 10 consecutive months with no TPN-related candidemias. The facility achieved and maintained 98% bundle compliance adherence and implemented multidisciplinary rounding. Additionally, the hospital participated in the system-wide reduction initiative, including sharing of lessons learned and best practices.

OUTCOMES ACHIEVED

- The D3N CLABSI rate per 1,000 central line days decreased from 3.6 in 2018 to 1.8 in 2019, which resulted in an estimated $100,854 in cost savings.
- CLABSI bundle compliance increased from 47% to 98% and was sustained.
- The hospital achieved 10 consecutive months with no TPN-related candidemias.
- The hospital avoided 51 excess hospital days in 2019.

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Unlocking Solutions for Patient Safety — "The Key Card Program": An Innovative, Scalable Model for Patient and Family Engagement in Reducing Hospital-acquired Conditions

NYU Langone Health – NYU Winthrop Hospital, Mineola

EXECUTIVE SUMMARY

Using the 10 target hospital-acquired conditions defined by the U.S. Department of Health and Human Services, NYU Langone Health – NYU Winthrop Hospital's data for children's services from 2017 showed that 80% of its preventable harm events were attributed to central line-associated bloodstream infections, catheter-associated urinary tract infections, falls and *Clostridioides difficile*. Despite multiple interventions, process high reliability was elusive. Aligning with NYU Langone Health's journey to "zero harm," the aim was to achieve a 40% HAC reduction with sustained process reliability greater than 90% through meaningful partnership with patients and families. The organizations modeled Toyota's Lean methodology known as "K-cards" to hardwire standard processes for frontline engagement. An interprofessional team then worked with patient and family advisors to translate the concept for patient engagement. "Key Cards" are visual cue cards used by frontline providers to standardize patient and family education on HAC bundles. Key Cards were piloted for CLABSI and CAUTI. Through a series of Plan-Do-Study-Act cycles, the process was refined and then adopted for fall prevention. Innovation led to the K-card change program.

OUTCOMES ACHIEVED

- Total harm events from HACs decreased by 48% from 2017 to 2019.
- The facility sustained a centerline shift to 95% for CLABSI and CAUTI and improved the trend line for the falls bundle of interventions.
- The organization achieved 85% overall satisfaction with the program and greater than 90% empowerment to partner in safety according to family surveys.

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Following the Foley Road to Mile Marker Zero

Olean General Hospital

EXECUTIVE SUMMARY

In 2014, a nurse-driven protocol was implemented in the intensive care unit in response to an increase in the number of catheter-associated urinary tract infections. The hospital had four goals in mind: raise awareness as to the appropriateness of urinary catheters, promote nurse autonomy with regard to removal, decrease utilization and decrease the risk of CAUTI in the critically ill patient.

OUTCOMES ACHIEVED

- Communication and collaboration between providers and ICU staff nurses related to urinary catheters improved.
- Awareness was increased in nursing staff to ask, "Why does my patient have a catheter?"
- There was a sustained decrease in catheter utilization rates over four years.

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Organization-wide Prevention Strategy for Hospital-acquired *Clostridioides Difficile*

Phelps Hospital/Northwell Health, Sleepy Hollow

EXECUTIVE SUMMARY

Hospital-acquired infections result in billions of dollars of excess healthcare costs. In spite of generally favorable infection control outcomes, Phelps Hospital was not seeing sufficient progress in reducing hospital-acquired *Clostridium difficile* infections. The adverse impacts of *C. diff* on already vulnerable patients include pain and suffering, extended length of stay, additional medication and costly care and short- and long-term disability and death. Phelps embarked on an organization-wide initiative to reduce the incidence and risk-adjusted rate. Leadership at all levels, as well as clinical, ancillary and support staff, had roles in this effort. Working with the health system network, Phelps implemented best practices for lab testing; antibiotic stewardship; enhanced environmental safety; and associated staff, patient and visitor education. With the hospital board's assistance, funds were raised to purchase and implement ultraviolet light sanitizing robots. The hospital has seen dramatically reduced incidence of *C. diff* infections.

OUTCOMES ACHIEVED

- The incidence of *C. diff* was reduced from 25 to 10 over three years.
- The CMS standardized infection ratio was reduced from 0.89 to 0.402 (Nov. 2019, year-to-date).
- Culture change is evidenced by 1,000 monthly handwashing observations from managers, staff and "secret shoppers."

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2020 HONOREE

The New Definition of "Clean" — Use of Adenosine Triphosphate Bioluminescence Surface Testing to Validate Cleaning Practices and Aid in Decreasing Hospital-acquired Infections

SBH Health System, Bronx

EXECUTIVE SUMMARY

Due to an increased number of hospital-onset multidrug-resistant organism and device-associated infections, institution-wide initiatives and education were implemented to decrease the incidence of these healthcare-associated infections. Of these hospital-wide initiatives, the introduction of the use of ATP bioluminescence surface tests after terminal cleaning were vital in ensuring a safe environment for patients. Transmission of healthcare-acquired pathogens is related to contamination of near-patient surfaces and equipment. Implementation of ATP bioluminescence was initially part of a Plan-Do-Study-Act cycle to decrease the number of hospital-onset *Clostridioides difficile* cases. With the success of the ATP method in confirming the highest level of cleaning and decreasing the number of *C. diff* cases, the program was expanded and specific rooms/units were prioritized based on pathogen and/or patient population. Additional PDSA cycles were initiated focusing on reducing additional healthcare-acquired infections, including ventilator-associated events, central line-associated bloodstream infections and catheter-associated urinary tract infections.

OUTCOMES ACHIEVED

- The hospital achieved an overall 73% decrease in HAIs from 2015 to 2019.
- From 2015 to 2019, there was a decrease in CAUTIs (87%), CLABSIs (75%), *C. diff* infections (81%) and VAEs (57%).
- From 2015 to 2019, the hospital realized an overall cost savings of $1,463,219 from decreasing HAIs.

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Incidence and Management of *Candida auris* in a Skilled Nursing Home

Schulman and Schachne Institute for Nursing and Rehabilitation, Brooklyn

EXECUTIVE SUMMARY

Candida auris is an emerging multidrug-resistant fungal infection that causes nosocomial transmission. The Schulman and Schachne Institute for Nursing and Rehabilitation analyzed the incidence and management of *C. auris* in its hospital-based skilled nursing facility. Data on resident demographics, concurrent medical comorbidities and medical interventions were obtained through medical records review. Nineteen residents were identified with *C. auris* in the SNF. Seventeen (89%) were admitted from hospitals and other SNFs. Additional infection control and prevention measures were instituted, including isolation precautions, environmental cleaning and disinfection and education. Among 19 residents, six (31%) were cleared using New York State Department of Health screening criteria.

OUTCOMES ACHIEVED

- The incidence rate of *C. auris* decreased.
- The facility implemented additional infection prevention and control measures.
- The rate of clearance from *C. auris* increased.

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Control and Prevention of Hospital-onset Methicillin-resistant *Staphylococcus Aureus* and *Candida auris* Infections

The Brooklyn Hospital Center

EXECUTIVE SUMMARY

The Brooklyn Hospital Center reviewed its Methicillin-resistant *Staphylococcus aureus* infection rates in 2018 and found that standardized infection rates were higher than the national average. A multidisciplinary group convened to perform an initial assessment of current practices, identify process gaps and establish improvement opportunities. A focused Plan-Do-Study-Act cycle was initiated in January 2019. The project goals were to:

- identify and isolate patients colonized with MRSA and *C. auris* at admission;
- decolonize MRSA-positive patients using mupirocin to prevent bacterial infections in the blood;
- improve hand hygiene practices;
- enhance daily and terminal cleaning of patient rooms and environmental cleaning to prevent spread of infections;
- quickly report positive *C. auris* cases to public health departments; and
- reduce the number of hospital-onset MRSA and *C. auris* cases by the end of 2019.

OUTCOMES ACHIEVED

- Hospital-onset MRSA (in blood) cases decreased by 57% in 2019 compared to 2018.
- The hospital significantly reduced *C. auris* cases since the implementation of the project in 2019.
- Hand hygiene compliance and personal protective equipment adherence improved.

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2020 HONOREE

Eliminating Unnecessary Treatment of *Clostridioides Difficile* Infection and Associated Patient Harm through Innovative Diagnostic Testing and Antibiotic Usage Reduction

The Saratoga Hospital, Saratoga Springs

EXECUTIVE SUMMARY

The Saratoga Hospital established a multidisciplinary team in fall 2018 to examine the incidence of *Clostridioides difficile* infection in the organization. Responding to clinician reviews of all hospital-acquired CDI, the facility realized that not all patients diagnosed with CDI actually possessed the true clinical condition. The organization's commitment to high reliability and "zero harm" inspired leadership and the board to conclude that reducing the incidence of CDI would be an organizational clinical priority in 2019. Initially, the aim was to reduce the number of reported hospital-onset CDI. However, the team discovered that its efforts would, in fact, have more widespread benefits to patients and the community than could have been anticipated. This was achieved through a physician and quality-led collaborative with the support of multiple internal and external stakeholders, including the New York State Department of Health; implementation of an innovative testing algorithm; and antibiotic usage reduction strategies.

OUTCOMES ACHIEVED

- The number of cases requiring treatment decreased by 66% from 207 in 2018 to 70 in 2019.
- The number of hospital-acquired infections was reduced from 28 in 2018 to nine in 2019, resulting in a standardized infection ratio of 0.376.
- Inpatient hospital quinolone utilization decreased by 52% from 2018 to 2019.

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Reducing Central Line-associated Bloodstream Infections

United Health Services, Johnson City

EXECUTIVE SUMMARY

Intravenous central line catheters provide direct access into the bloodstream for fluids, medications and blood draws. Central line-associated bloodstream infections are associated with an increased mortality rate, length of stay and financial burden. A bundled and multidisciplinary approach was taken, which resulted in new methods being researched, trialed and implemented for insertion and management of central venous catheters. The approach included:

- implementation of midlines, when appropriate;
- a dedicated central line team using a risk prediction model to prioritize patients on the daily worklist;
- re-education and electronic health record support on evidence-based best practice for appropriate indications for central line placement and continued use of central lines; and
- product changes to improve central line dressing maintenance.

These approaches were brainstormed by a multidisciplinary team, including frontline staff, and shared with leadership for buy-in and approval.

OUTCOMES ACHIEVED

- The CLABSI rate decreased by 35% from 2017 to 2018, and by an additional 15% from 2018 to 2019.
- The central venous catheter average length of dwell decreased by one day.
- Since implementation, United Health Services achieved a 5% reduction in the number of CVC dressing changes prior to seven days.

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Evidence-based Bundle in the Quality-of-care Management of *Staphylococcus Aureus* Bacteremia

WMC Health–Westchester Medical Center, Valhalla

EXECUTIVE SUMMARY

Staphylococcus aureus bacteremia causes significant morbidity, mortality and healthcare costs; complications are frequent; and mortality ranges from 20% to 40%. Westchester Medical Center's institutional priority was to improve patient outcomes, decrease length of stay, and prevent complications and readmissions associated with SAB. To address this, WMC's antimicrobial stewardship program developed a comprehensive management plan that included conducting real-time blood culture surveillance and review, implementing a SAB treatment bundle and using newer technology for rapid organism/resistance identification. This was done in conjunction with a clinical antibiotic allergy assessment program. This initiative was approved by the antibiotic stewardship program quality council with the support of hospital leadership and was implemented in January 2019.

OUTCOMES ACHIEVED

- This initiative led to 125 clinical interventions in 98 SAB events.
- Overall compliance with the SAB treatment bundle was 82%.
- The facility realized a 14% decrease in vancomycin and 10% increase in targeted beta-lactam utilization for SAB.

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Chapter 6:

Healthcare-associated Conditions

Falls

Code F — Preventing and Reducing Falls through Identification of High-risk Patients at the End of Life

Good Shepherd Hospice, Melville

EXECUTIVE SUMMARY

Hospice patients are particularly at risk for falls due to their frail physical condition and declining functional status. Falls lead to significant negative consequences for quality of life, adding to the burden of suffering for both patients and caregivers. Patients who fall subject themselves to injury and become a higher risk for resource utilization, including emergency department visits and hospitalizations. This project was initiated to take a much needed, different approach to how the agency was preventing falls and reducing the risk of injury for the patients it serves. Agency data revealed that in 2016 there was a 2.5% fall rate per 1,000 patient days (326 falls). In 2017, this trend increased, with a fall rate of 2.9% (368 falls). Good Shepherd Hospice wanted to reverse this trend and prevent injury at the end of life.

OUTCOMES ACHIEVED

- Improved identification of patients at risk for falls (2018; 303) (2019; 1,112).
- Realized a decrease in the patient fall rate (2018; 2.2%) (2019; 2.6%).
- Decreased resource utilization.

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Zero Inpatient Falls

Ira Davenport Memorial Hospital, Bath

EXECUTIVE SUMMARY

This project involved using an interdisciplinary approach to bring inpatient falls to zero from an annual average of five per year. The customer safety team identified the need for involving all members of the healthcare team in fall prevention. Interventions implemented were interdisciplinary daily rounding with pharmacy, patient safety, social services and nursing leadership; call light answering by all disciplines; and identifying high risk for fall through appropriate signage. Through direct observation audits and individual education, the outcome was zero falls in the inpatient department in 2019.

OUTCOMES ACHIEVED

- Interdisciplinary team collaboration was enhanced.
- Communication regarding high risk for falls improved.
- The hospital achieved zero falls in the inpatient department in 2019.

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Implementing a Successful Mobility Program on Inpatient Units

Mount Sinai South Nassau, Oceanside

EXECUTIVE SUMMARY

Mount Sinai South Nassau identified a need for increased mobility in its hospitalized patients, especially among the geriatric population. The goal of this project was to ambulate greater than 60% of the patient population on the unit. This would decrease length of stay, bring the fall rate below the National Database of Nursing Quality Indicators benchmark and decrease the number of hospital-acquired pressure ulcers. To achieve this goal, the hospital designated an ambulator on each day and evening shift.

OUTCOMES ACHIEVED

- Length of stay decreased.
- Patients suffered zero hospital-acquired pressure injuries during the past year.
- The number of patient falls decreased.

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Championing Fall Prevention

NewYork-Presbyterian Brooklyn Methodist Hospital

EXECUTIVE SUMMARY

Falls are a leading cause of death and disability and the most commonly reported adverse event in a hospital setting. They impact safety, costs, efficiency and patient and staff satisfaction. The goal of the fall prevention program at NewYork-Presbyterian Brooklyn Methodist Hospital is to reduce patient falls and injuries through the implementation of Falls TIPS, the only evidence-based fall prevention program, and engagement of falls champions. Every shift, patients are assessed using an evidence-based scale, interventions are tailored to the patients' risk factors, and patients and their families are engaged and educated throughout the process. Risk factors and interventions are communicated to the care team via icons on bedside signs that are generated from the electronic medical record. The interdisciplinary falls committee and falls champions on every unit are involved in the planning, implementation and ongoing monitoring of the program. Interactive fairs and contests reinforce best practices.

OUTCOMES ACHIEVED

- Hospital falls decreased by 15% from 2018 to 2019 and by 46% since 2016.
- The hospital achieved 90% compliance with the newly-implemented Falls TIPS program.
- Participation and engagement of falls champions increased.

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Preventing Newborn Falls Across a Health System: Reaching for Zero

NewYork-Presbyterian Hospital, New York City

EXECUTIVE SUMMARY

A newborn fall can result in severe physical harm or death to the infant, devastating emotional trauma to parents and staff, additional costs and legal concerns. Newborn falls are known to be widely underreported as feelings of shame and guilt occur. Supporting the important couplet care best practices of breastfeeding promotion, skin-to-skin contact and rooming-in may present a challenge while ensuring the safety of the newborn. Following a 2018 increase in newborn falls, the NewYork-Presbyterian system, which delivers over 25,000 babies yearly, set a goal to eliminate newborn falls across the enterprise. Methods included room signage throughout the maternity service, staff education, family education, ancillary services education, a homegrown risk assessment, policy and medical record content and near-miss event capture and tracking. A multimodal monitoring tool completed by service leaders assessed patient and staff knowledge, signage visibility and adherence to the risk assessment in the medical record.

OUTCOMES ACHIEVED

- Newborn fall events were reduced by 64% over a 16-month period across the enterprise.
- The organization learned that a newborn fall risk assessment can standardize the approach to fall prevention among the health team.
- All employees interfacing with families on the maternity service are more aware of newborn falls.

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Reducing Falls after Discharge from an Inpatient Rehabilitation Facility

St. Charles Hospital, Huntington

EXECUTIVE SUMMARY

Fall prevention in hospitals and inpatient rehabilitation facilities primarily focuses on preventing falls within these facilities, leaving a gap in awareness of the fall risk and incidence after discharge to the community. A durability of outcomes survey is completed for each adult patient three months after discharge, including an inquiry related to patients reporting a fall. In 2015, 23% of patients (n=572) reported a fall within three months of discharge. In October 2016, St. Charles Hospital implemented a fall prevention/home safety education class. However, from October 2016 to September 2017, 20.7% of patients continued to report falling post-discharge. The goals of this project were to minimize potential harm to patients and reduce readmissions resulting from falls at home by decreasing post-discharge falls to 10%. Six Sigma methodology was employed to achieve these goals and led to the development of a post-discharge fall risk screening tool and implementation of subsequent improvement strategies with positive results.

OUTCOMES ACHIEVED

- The fall rate in 2019 was 17.2% (n=581), which was a 5.7% reduction from 2016.
- Fall rates were between 9% and 16% in six out of seven months.
- A screening tool was developed and used on admission to identify patients at risk of falling at home.

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Chapter 7:

Healthcare-associated Conditions

Pressure Injuries

Strategies for Improving Hospital-acquired Pressure Injury Rates in an Acute Care Facility

Mount Sinai St. Luke's, New York City

EXECUTIVE SUMMARY

In 2017, Mount Sinai St. Luke's analyzed data revealing an opportunity to decrease hospital-acquired pressure injuries. The goals of the initiative were to improve nursing engagement and reduce hospital-acquired pressure injuries, thereby reducing hospital length of stay and the cost burden to the institution. The wound, ostomy and continence nurse spearheaded an organizational pressure injury prevention strategy grounded in a culture of excellence, improved quality outcomes and reduced health costs. The wound, ostomy and continence nurse emerged as a transformational leader engaging key stakeholders to evaluate current evidence, identify best practices and establish evidence-based guidelines grounded in Lean methodology.

OUTCOMES ACHIEVED

- In 2018, HAPIs were reduced from 19 in February to seven in September.
- A total cost savings of $1,010,000 was realized from February 2018 to October 2019.
- An 81.77% reduction in HAPIs was achieved from October 2018 to October 2019.

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Positive Outcomes of an Evidence-based Pressure Injury Prevention Program

NewYork-Presbyterian Brooklyn Methodist Hospital

EXECUTIVE SUMMARY

Hospital-acquired pressure injuries are a global problem with prevalence averaging about 10% in acute care settings. Hospitals incur expenses related to legal cases, as well as reimbursement penalties. After a gap analysis and literature review by wound, ostomy and continence nurses at NewYork-Presbyterian Brooklyn Methodist Hospital, an evidence-based pressure injury prevention program was implemented. Nursing leadership and multidisciplinary teams supported the program. The aim was to reduce the incidence and prevalence rates of HAPI by using an evidence-based pressure injury prevention bundle. Patients were assessed each shift using the Braden scale, an evidence-based risk assessment tool. Patients deemed high risk had a bundle created for them, which included turning and positioning, the use of support surfaces that offer pressure redistribution, barrier protection for incontinence and products to protect them from device-related injuries.

OUTCOMES ACHIEVED

- The incidence of HAPI decreased 67% from 2016 to 2019.
- HAPI prevalence was reduced by 93% from 4.0% in 2014 to 0.29% in 2019.
- Registered nurse attendance at and participation in the pressure injury prevention collaborative council improved.

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Chapter 8:

Driving Treatment and Diagnostic Innovation

Readmission Reduction

A Congenital Heart Surgery Program Achieved Sustainable Quality through Hospital-Community Partnerships

Albany Medical Center

EXECUTIVE SUMMARY

Congenital heart defects occur in 1% of births, and one in four are "critical" defects that require surgery within the first year of life. Pediatric heart surgery programs represent an enormous investment of human and financial resources and for that reason such programs are mostly concentrated in large cities. This can be an insurmountable access barrier for rural CHD families. For two decades, Albany Medical Center has maintained a small CHD program that performs lifesaving heart surgery on newborns and infants with CHD. By focusing on personalized, family-centered care, using modern data analytics to track quality and unique community partnerships to provide aftercare, the program has achieved perennial quality and safety outcomes equivalent to top-performing big-city children's hospitals, even for the most complex types of CHD surgery. This gives CHD families across northeastern New York state and southern Vermont access to safe, high-quality care close to home.

OUTCOMES ACHIEVED

- A sustainable academic-community partnership was developed around CHD treatment.
- A CHD surgery program was developed that has had excellent results over a sustained period.
- A low-volume CHD surgery program was able to balance good access with good results over time.

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Use of an Evidence-based Decision-support Algorithm to Reduce Percutaneous Coronary Intervention Mortality

Albany Medical Center

EXECUTIVE SUMMARY

Percutaneous coronary intervention is one of the most frequently performed surgical procedures in New York state. The mortality rate for PCI varies among hospitals in the state and this disparity represents a major safety and quality opportunity. Albany Medical Center used a PCI risk score algorithm previously developed by the state's PCI registry to evaluate the appropriateness of non-emergency PCI at the hospital. Over a two-year period, deferring prospective PCI cases with calculated risk scores greater than 15 reduced the hospital's procedure-related PCI mortality rate by about 70% for both emergency and all PCI cases. Albany Med believes application of this initiative in all New York state hospitals would substantially improve patient safety and reduce outcome disparity.

OUTCOMES ACHIEVED

- Using PCI risk score as a case selection filter reduced the non-emergency PCI mortality rate by approximately 75%.
- Using PCI risk score as a case selection filter reduced the overall PCI mortality rate by about 50%.
- Evidence-based case selection filters were introduced into the PCI program.

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Immediate Postpartum Intrauterine Device Initiative: Improving Maternal Outcomes through Family Planning

Bellevue Woman's Center, Ellis Medicine, Schenectady

EXECUTIVE SUMMARY

Teen pregnancy in Schenectady County occurs at much higher rates than in neighboring counties. At Ellis Medicine's Bellevue Woman's Center, 16% of births to teenage mothers are repeat births. Teens with repeat births are at risk for preterm births, low birth weight and infant mortality. To combat this issue, Bellevue implemented an evidence-based initiative for the provision of long-acting, reversible contraceptives in the immediate postpartum period. These intrauterine devices, implanted in the delivery room, provide teens with up to 10 years of pregnancy protection. A comprehensive policy, procedures and protocols were put in place to ensure the continued success of this initiative. Within the first year of implementing the program, eight IUDs were placed, representing 28% of all teen births at the facility. Plans are in place to continue outreach to community obstetricians to ensure prenatal counseling and to offer another long-acting birth control option, Nexplanon, to teen mothers at delivery.

OUTCOMES ACHIEVED

- Twenty-eight percent of teens giving birth at the facility received a long-acting, reversible contraception post-birth.
- All of Ellis' family medicine residents and obstetric hospitalists have been trained in IUD placement.
- The facility increased nurses' awareness of the importance of immediate postpartum IUD placement for teen moms.

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Pediatric Asthma Management across the Care Continuum

Catholic Home Care, Melville

EXECUTIVE SUMMARY

The American Lung Association has identified asthma as the most common chronic disease in children. According to the Centers for Disease Control and Prevention, asthma affects over six million children under the age of 18 annually and accounts for 439,000 hospitalizations, 1.6 million emergency department encounters and 10.5 million physician encounters, all at a cost of approximately $62.8 billion (2019). Catholic Home Care's pediatric asthma program employs a population health approach to care delivery in an effort to improve the experience and outcomes for children and their families in a cost-effective manner. Using an integrative approach to care, championed by the strong relationship with system hospitals, physicians and partner entities such as the Asthma Coalition of Long Island, steps are taken to remediate triggers, provide education and minimize health disparities within the communities of greatest asthma concentration.

OUTCOMES ACHIEVED

- A more than 50% decrease in hospitalizations was realized.
- The organization met goals regarding Delivery Service Reform Incentive Payment.
- Referrals increased 15%.

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Management of Postpartum Pre-eclampsia through Expedited Remote Patient Monitoring

Catholic Home Care, Melville

EXECUTIVE SUMMARY

Pre-eclampsia is a disorder characterized by increased blood pressure, often combined with proteinuria or additional symptomology inclusive of thrombocytopenia, renal insufficiency, impaired hepatic function, pulmonary edema or cerebral or visual symptoms (Healthcare Costs and Utilization Project, 2017). Remote patient monitoring is a tool that can be employed to maximize patient engagement and improve adherence to the prescribed health management plan (Drees, 2019; Rhoads et al., 2017). In response to the exponential growth of postpartum pre-eclampsia cases, Catholic Home Care developed a pilot project to refer women with postpartum pre-eclampsia to home care for weekly to biweekly visits from a maternal child health nurse combined with daily remote patient monitoring.

OUTCOMES ACHIEVED

- Catholic Home Care implemented remote patient monitoring equipment in a timely manner.
- The agency experienced no re-hospitalizations or emergency encounters.
- The organization realized decreased cost of $21.47 per device for a total savings of $1,116.44.

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Implementation of a Clinical Health Coach Program in the Ambulatory Setting

CHS: Ambulatory Clinical Practice, Melville

EXECUTIVE SUMMARY

Chronic diseases are among the most common, costly and preventable of all health problems in the United States. Chronic disease management requires an integrated team-care approach. Self-care is a patient-driven component that is essential to manage chronic diseases. As diabetes is a costly chronic disease and 95% of diabetes care is self-care, it became the initial focus of the program. The organization was awarded a grant to introduce a clinical health coach program into the ambulatory setting to help patients manage their chronic diseases. Medical assistants and licensed practical nurses were selected to complete specialized training. This training focused on engaging patients to help them uncover their own motivations to inspire meaningful self-care behaviors, leading to improved clinical health outcomes. This program has dual importance, bringing the patient to the center of care and elevating the MA/LPN on the career ladder. A Plan-Do-Study-Act method was used.

OUTCOMES ACHIEVED

- Increased patient engagement: 100% of coached patients engaged to create a self-care plan goal.
- Improved clinical outcomes: HbA1c (diabetes clinical measure) average reduced from 8.1 to 7.7.
- Achieved career ladder advancement: 93% earned a clinical health coach certificate.

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Does Accelerated Access to a Cardiologist in Moderate-risk Chest Pain Patients Reduce Emergency Department Admissions?

Jacobi Medical Center, Bronx

EXECUTIVE SUMMARY

Patients with moderate risk history, electrocardiogram, age, risk factors and troponin (HEART) scores have been shown to benefit from cardiology consultation and testing to further refine their risk of an adverse cardiac event. Prior to this intervention, the usual practice at Jacobi Medical Center was to admit these patients. Third-party payers were denying coverage for an increasing number of these admissions. By offering early cardiology consultation to the emergency department and, if deemed necessary, same-day provocative cardiac testing, the hospital was able to reduce the admission rate of this patient population from greater than 90% to 50%, without apparent adverse events. When admission was required, the average hospital length of stay was reduced from two days to less than one day. Prospective data collection is currently underway to confirm these initial results and assess longitudinal clinical outcomes, financial sustainability and patient satisfaction.

OUTCOMES ACHIEVED

- The admission rate of moderate-risk chest pain patients evaluated by emergency cardiology care was reduced.
- Hospital length of stay for patients with moderate-risk chest pain evaluated by ECC decreased.
- The safety of discharge of moderate-risk chest pain patients evaluated by ECC was improved.

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Inpatient Asthma Education and Disease Self-management Reduces Readmissions and Emergency Room Visits

Jamaica Hospital Medical Center, MediSys Health Network

EXECUTIVE SUMMARY

Controlling asthma to reduce morbidity and mortality is a global priority. While there has been a downward trend in hospital admissions, emergency room visits remain high, especially in New York City. Research has shown that patient education and disease self-management can reduce asthma exacerbation resulting in ER visits and hospitalizations. Jamaica Hospital Medical Center's goals were to reduce asthma patients' future visits to the ER and reduce readmissions. With a grant to fund the startup of this initiative, the medical center employed a certified asthma educator to provide asthma patients the knowledge and skills needed to effectively self-manage their disease on discharge. At the end of the six-month grant period, the hospital funded the full-time certified asthma educator position to continue the program.

OUTCOMES ACHIEVED

- Asthma education reduced adult asthma patients' readmissions by 82% and ER visits by 66%.
- Asthma education reduced pediatric asthma patients' readmissions by 89% and ER visits by 64%.
- All patients seen by the asthma educator were discharged with an asthma action plan.

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Collaborative Leadership Dyad is Associated with Improved Organ Donation Metrics

Maimonides Medical Center, Brooklyn

EXECUTIVE SUMMARY

Innovative techniques are required to improve quality metrics for organ procurement organizations. One problem is a lack of specific accountability on the part of the OPOs and hospitals to improve these quality metrics. Using techniques from leadership, operations management and organizational behavior, Maimonides Medical Center hypothesized that the creation and implementation of a collaborative leadership dyad between the OPO and hospital would improve outcomes. In May 2017, the director of adult critical care was designated as the liaison for all issues related to organ donation for the medical center. Concomitantly, the OPO created a similar functional position. This leadership dyad facilitated implementation of an institutional donor council, community outreach events and physician educational opportunities. Physician education consisted of in-person instruction every six months and a mandatory annual online module. Live education was collaborative between LiveOnNY and the local physician champion.

OUTCOMES ACHIEVED

- Organ referrals increased 34% from 142 in 2017 to 190 in 2019.
- The average consent rate more than doubled, from 14% in 2017 to 29% in 2019.
- Total organ donors per year increased 267%, from three in 2017 to 11 in 2019.

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Pulmonary Embolism Response Team Decreases Morbidity and Mortality and Increases Cost Effectiveness throughout the Community

Mercy Hospital of Buffalo, Catholic Health System

EXECUTIVE SUMMARY

Mercy Hospital took an innovative approach designed to reflect national precedent regarding new therapeutic options for patients with pulmonary embolism. Its approach included using pulmonary embolism rapid response teams that were educated and designed to understand and diagnose patients eligible for pulmonary embolism response team therapy.

OUTCOMES ACHIEVED

- Length of stay decreased from nine intensive care unit days pre-PERT implementation to four ICU days post-PERT implementation.
- Early and rapid identification and intervention improved patient outcomes and decreased mortality.
- Protocolized care was adjusted to national recommendations.

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Improving Readmission Rate and Post-operative Follow-up in Bariatric Surgery

Mount Sinai Beth Israel, New York City

EXECUTIVE SUMMARY

The readmission rate for sleeve gastrectomy surgeries at Mount Sinai Beth Israel was higher than the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program benchmark. Reasons for readmission included pulmonary embolus, nausea/vomiting and infection. Venous thromboembolism is the most common cause of mortality after bariatric surgery. The goals for this initiative were to identify the reasons for post-operative readmissions in sleeve gastrectomy surgeries, reduce the rate of readmissions to meet the MBSAQIP criteria and improve the follow-up rate. The hospital completed a retrospective chart review of bariatric surgical patients operated on between April 1, 2015, and July 30, 2016. Metrics from before and after the quality improvement initiative were compared for improvement in compliance.

OUTCOMES ACHIEVED

- The hospital achieved consistent compliance with administration of unfractionated heparin prior to incision.
- Documentation and timely administration of heparin every eight hours improved.
- The readmission rate in sleeve gastrectomy is as expected, compared to the MBSAQIP benchmark.

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Improving Quality in Peri-operative Transgender Care: A Novel Interdisciplinary Approach for Gender-affirming Surgery

Mount Sinai Downtown – New York Eye and Ear Infirmary

EXECUTIVE SUMMARY

Transgender patients disproportionately experience healthcare discrimination and difficulty accessing high-quality care, while having high rates of psychiatric/psychosocial needs and distrust of providers. Many experience homelessness, physical/emotional/sexual abuse and untreated/undertreated medical conditions, including HIV/hepatitis. Providing quality care for this population required helping them navigate their holistic healthcare experience and rebuilding their trust. New York Eye and Ear Infirmary's efforts focused on transgender patients undergoing gender-affirming surgery in the largest comprehensive transgender care program in the United States. The organization created a fully-integrated, interdisciplinary recovery model, helping patients navigate a complex medical system.

OUTCOMES ACHIEVED

- Communication with doctors improved from the 95th percentile to the 99th percentile.
- Care transition improved from the 64th percentile to the 99th percentile.
- Willingness to recommend improved from the 38th percentile to the 93rd percentile.

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Initiation of Quantitative Blood Loss Measurement for Cesarean Deliveries

NewYork-Presbyterian Lawrence Hospital, Bronxville

EXECUTIVE SUMMARY

Given the state and national attention on reducing maternal mortality, NewYork-Presbyterian Lawrence Hospital focused on initiating and standardizing quantitative blood loss measurement for cesarean deliveries.

The goal was to achieve universal quantitative blood loss at all deliveries, defined as greater than 95% compliance with QBL measurement for cesarean section deliveries.

The hospital worked toward this goal by standardizing the QBL process with worksheets and instructions so that patients at risk for postpartum hemorrhage were accurately identified and the process was clear for all members of the multidisciplinary team.

OUTCOMES ACHIEVED

- Goal: ≥95% compliance with QBL measurement for cesarean section deliveries.
- Accurate identification of patients at risk for postpartum hemorrhage due to excessive QBL.
- Enhanced communication of QBL throughout the multidisciplinary team.

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Improving Organ and Tissue Donation Metrics

NewYork-Presbyterian Hospital, New York City

EXECUTIVE SUMMARY

The purpose of this project was to increase the number of organ and tissue donations, thereby affecting the lives of individuals and families who are organ recipients and organ donors. By way of partnerships, process improvement and education, more potential donors and donations were identified. This not only saved lives but also provided some sense of peace and comfort for the families who recently lost loved ones. They may take solace in knowing their loved ones have gifted others. Given the size of NewYork-Presbyterian, the community served and the current performance, the opportunity to make an impact was evident. The approach used creative ideas, reallocation of resources, engagement of stakeholders and process improvement to sustain the performance improvement.

OUTCOMES ACHIEVED

- The total number of organ donors increased.
- The total number of tissue donors grew.
- The number of identified potential organ donors expanded.

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Enhanced Recovery After Surgery Bundle for Orthopedic Patients: Improving Patient Outcomes

NewYork-Presbyterian Hudson Valley Hospital, Cortlandt Manor

EXECUTIVE SUMMARY

The implementation of Enhanced Recovery After Surgery is the standardization of care in the pre-hospital, pre-operative, intra-operative, post-operative and post-discharge phases of care. NewYork-Presbyterian Hudson Valley Hospital's goal is to decrease the surgical stress response, thereby reducing surgical morbidity and mortality and assisting patients back to baseline sooner. The objective of this initiative was to introduce the ERAS® bundle to decrease post-operative complications. The hospital learned that the efficacy of the ERAS program is attributed to the bundle and its components, which include patient education, pre-operative fasting, utilization of carbohydrate beverage, nonopioid modalities, glucose control, early ambulation and pneumonia and infection prevention. The methods included development of education to be provided through in-services to align the workflow between departments. In-services included education within the orthopedic unit and the surgical service department on the ERAS bundle.

OUTCOMES ACHIEVED

Over a two-month period the orthopedic unit:

- saw a decrease in surgical site infections;
- earned a greater patient satisfaction rating; and
- decreased length of stay.

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Interdisciplinary Collaborative Project to Reduce Readmissions

Newark-Wayne Community Hospital, Newark

EXECUTIVE SUMMARY

Newark-Wayne Community Hospital identified chronic obstructive pulmonary disease readmissions as an area of opportunity for quality improvement. To address this, the hospital developed a collaborative team with members of a local health plan. Together, they implemented small tests of change, developing a layered process for providing patient education, with the ultimate goal of reducing COPD readmissions. This project enabled the hospital to build a strong working relationship with members of the health plan. The hospital also received positive feedback from the patients in the target population.

OUTCOMES ACHIEVED

- The hospital reduced COPD readmissions.
- This initiative resulted in positive patient feedback.
- The organization developed trust with members of the health plan.

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Longitudinal Care Coordination

Nicholas H. Noyes Memorial Hospital, Dansville

EXECUTIVE SUMMARY

Nicholas H. Noyes Memorial Hospital recognized the need for care coordination and effective care transitions for medically and socially complex patients with histories of high utilization of the healthcare system. The goal was to reduce healthcare utilization and the associated cost of caring for these patients across the healthcare system. To accomplish this, the hospital developed a more contemporary approach by adapting a longitudinal connective care coordination program.

OUTCOMES ACHIEVED

- The hospital reduced high-utilizer 90-day readmissions by 74%.
- The facility implemented a new model of discharge planning for high utilization patients that incorporates motivational interviewing.
- Support for patients within the community was strengthened by appointing an RN care manager.

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The Impact of a Nitrous Oxide Analgesia Program on Narcotic Use Rates in Laboring Women

Northern Dutchess Hospital, Rhinebeck

EXECUTIVE SUMMARY

In an effort to decrease opioid use on its maternity unit, Northern Dutchess Hospital implemented a narcotic-free nitrous oxide program for pain management in the intrapartum period. The goal was to offer an alternative to narcotic medications for laboring women. The nitrous oxide program was built and launched at the birthing center and data were collected to evaluate the impact of this initiative on narcotic use rates during labor, specifically nalbuphine use.

OUTCOMES ACHIEVED

- The intrapartum narcotic use rate decreased by 46%.
- Patient satisfaction scores for pain communication improved.
- The facility established a model for future interdepartmental collaboration.

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Decreasing Admissions and Improving Quality

Our Lady of Consolation, Huntington

EXECUTIVE SUMMARY

The readmission rate for hospitals and nursing homes directly corresponds to the quality of care being delivered to patients and residents. The Centers for Medicare and Medicaid Services includes readmission rates in its value-based payment program and facilities are financially penalized if readmission rates are higher than the state and national averages. These measures are part of the five-star quality program published by CMS. Our Lady of Consolation's goal was to reduce hospital readmissions and associated financial penalties while increasing quality of care to residents. The facility used the Plan-Do-Study-Act method to accomplish this. The organization successfully decreased readmission rates by implementing different practices focused on causes and solutions.

OUTCOMES ACHIEVED

- The readmission rate decreased from 17.5% in 2018 to 14.6% in 2019.
- Staff safety events decreased from 16 in 2018 to six in 2019.
- Patient safety events decreased from 61 in 2018 to 32 in 2019.

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It Takes a Village: Improving Pediatric Asthma Care through Local, Community and Nationwide Efforts

Richmond University Medical Center, Staten Island

EXECUTIVE SUMMARY

Asthma affects 10% of children in the United States, with an estimated treatment cost of more than $3 billion per year. Over four years, Richmond University Medical Center actively advocated and collaborated with local, community and national leaders to improve the quality of life for children with asthma by reducing emergency department visits, hospitalizations and absences from school, thereby effectively reducing the associated healthcare burden. Resident-led quality improvement projects were encouraged and focused on standardizing asthma care, education and seamless transition of care of hospitalized patients. These projects were presented at local and national meetings. The organization's patient-centered medical home leaders worked alongside community partners and local government to establish the local asthma coalition, while maintaining internal QI measures. The hospital became an accredited pediatric asthma center and joined a national collaborative to standardize asthma care in the ED and inpatient settings using clinical pathways.

OUTCOMES ACHIEVED

- The percentage of asthma patients from the PCMH seen in the ED remains below 10%.
- Peak flow measurement and home plan discussion rates are improving.
- There was a decrease in transfers to a higher level of care as well as seven-day, 30-day and 120-day returns.

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Making Better Decisions by Implementing Changes That Stick — Utilizing The P.R.I.S.E. and P.E.G.S. Models to Better Decision-making and Problem Solving

Rochester Regional Health – Long-term Care Division

EXECUTIVE SUMMARY

Commitment and dedication to quality assurance and performance improvement should be key components of any long-term care facility's mission statement. However, the LTC industry struggles with having enough employee resources and time to handle the myriad of projects and/or tasks associated with process improvement. The Centers for Medicaid and Medicare Services requires skilled nursing facilities to perform at least one performance improvement project annually and to include the PIP within the facility's quality assurance and performance improvement programs. Rochester Regional Health's initiative was implemented to develop a more efficient and effective way for interdisciplinary teams to better identify the problems within a desired project and then quickly identify potential root causes within the current state that contribute to unfavorable outcomes. The organization developed two decision/problem solving methodologies for the team to use: the P.R.I.S.E. and P.E.G.S. Models.

OUTCOMES ACHIEVED

- The organization improved decision-making models for problem solving.
- Best practices were identified to improve CMS five-star health, quality and overall star ratings.
- Rochester Regional Health achieved continuous improvement on targeted goals.

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Life with a Left Ventricular Assist Device: Reducing Morbidity and Mortality through Patient, Family and Community Education

Saint Francis Hospital – The Heart Center, Huntington

EXECUTIVE SUMMARY

In increasing numbers, patients and practitioners are electing left ventricular assist devices as destination therapy in patients for whom other heart failure treatments have failed. While the first LVADs were intended to function for hours to days while a patient awaited a heart transplant, the FDA approved LVAD implantation as destination therapy in 2003. Now, tens of thousands of patients have had LVADs implanted and are living with mechanical circulatory support, some for many years. As devices become smaller and more technologically advanced, and as minimally-invasive implantation methods are developed, the numbers continue to grow. The LVAD program seeks to provide the best possible outcomes for patients undergoing implantation of a mechanical circulatory assist device, as measured by duration and quality of life after implantation, incidence of complication and patient satisfaction. This is accomplished by establishing care team collaboration from the initial encounter.

OUTCOMES ACHIEVED

- Driveline infections decreased compared to the national benchmark.
- Incidence of disabling stroke was reduced compared to the national benchmark.
- Pump replacement due to pump thrombosis decreased compared to the national benchmark.

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Keep Calm, Latch On and Supplement Safely

St. Catherine of Siena Medical Center, Melville

EXECUTIVE SUMMARY

Ensuring the safety of infants when the mother's milk supply is not sufficient to satisfy the baby's needs is vital for mothers wishing to breastfeed. Supplementing with infant formula by bottle in the first few days of life decreases the likelihood of sustained breastfeeding. The use of artificial nipples leads to overfeeding, nipple confusion and lack of maternal confidence with breastfeeding. Supplementing using alternative methods with smaller volumes can safely feed infants while preserving breastfeeding. St. Catherine of Siena Medical Center's goal is for all babies to be well fed, as evidenced by weight loss below 10%; and for all mothers to demonstrate successful breastfeeding, as evidenced by a LATCH score of 10 at time of discharge. The LATCH score is a numerical assessment tool used to evaluate the effectiveness of breastfeeding. A score between 8 and 10 indicates successful breastfeeding. The organization used the Plan-Do-Study-Act method for this initiative.

OUTCOMES ACHIEVED

- Through the use of safe supplementation methods such as slow-flow nipples, cups, spoons and syringes, the volume and number of infant formula supplements decreased.
- Newborn weight loss was under 10%.
- The LATCH score was 10 at discharge.

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Implementation of Clinical Care Pathway Reduces Measles Exposures during Outbreak in New York

Westchester Medical Center, Valhalla

EXECUTIVE SUMMARY

During a measles outbreak in New York, a multispecialty group at Westchester Medical Center developed a pathway to ensure appropriate screening, diagnostic testing, isolation and care for patients with suspected measles. The hospital worked with local and state health departments to rapidly identify possible measles cases and facilitate community exposure investigations. Data review of exposure cases identified vulnerabilities where potential measles cases could expose other patients and staff. The hospital recognized that, due to the airborne transmissibility and high infectivity rate for measles, screening with the registrars in the emergency department did not prevent exposures. Therefore, the organization implemented a process positioning medical technicians at the ED entrances to screen for measles risk factors. The hospital also partnered with ambulance and transport services to ensure patients were screened for measles risk factors prior to arrival, and its transfer center implemented a screening questionnaire for patients being transferred to the facility.

OUTCOMES ACHIEVED

- Measles exposures decreased within the facility.
- The hospital rapidly identified, treated and tested patients with possible measles infection.
- Secondary cases of measles were prevented within the facility.

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eICU Remote Clinician Corrects the Discrepancies Between Charted and Actual Observed RASS Scores in Mechanically Ventilated NeuroICU Patients

Westchester Medical Center, Katonah

EXECUTIVE SUMMARY

Westchester Medical Center initiated a study to ensure that mechanically ventilated patients were receiving the appropriate level of sedation, according to the Richmond Agitation-Sedation Scale score. The hospital audited charted and actual observed RASS scores to determine if RASS charted/observed RASS scores were significantly different. Next, the team assessed whether implementation of an electronic intensive care unit clinician assessing a patient's RASS scores during the nurse's assessment will make a significant improvement in RASS concordance rates. The hospital found that adding an eICU clinician assessment improved the alignment of observed/actual and charted RASS scores, resulting in better patient care for mechanically ventilated patients.

OUTCOMES ACHIEVED

- Remote eICU clinician assessment resulted in greater consistency in the observed/actual and charted RASS scores.
- RASS concordance increased quickly with eICU assessments over the two-month trial phase.

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Chapter 9:

Driving Treatment and Diagnostic Innovation

Behavioral Health

Telepsychiatry: Improving Care for the Behavioral Health Patient in Crisis

Catholic Health Services of Long Island, Melville

EXECUTIVE SUMMARY

In 2016, the New York State Office of Mental Health approved Catholic Health Services of Long Island to implement one of three telepsychiatry pilots across New York state. OMH's goal was "improved access to care, provision of care locally in a more timely fashion, and improved continuity of care, treatment compliance, and coordination of care" (Part 596, Telemental Health Regulations). CHSLI is committed to meeting the community's behavioral health needs, especially the needs of those who are most vulnerable — emergency department patients. Annually, there are nearly 6,000 patients across the health system's EDs that require psychiatric care. The mental health professionals shortage makes it challenging to find non-business-hour psychiatric coverage. This project represents the creative use of technology to connect the remote psychiatrist with patients across multiple hospitals to provide more expeditious care regardless of hour of day. Decreasing turnaround time for admissions and discharges improves quality of care and patient outcomes.

OUTCOMES ACHIEVED

- The average turnaround time for ED psychiatric consults was reduced from 12 hours to just under two.
- Discharges and admissions were expedited for 950 ED psychiatric patients, with 98% patient satisfaction.
- ED throughput increased, saving 3,500 patient hours per year — a $2 million value for the three years.

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Perinatal Mood and Anxiety Disorders Management

Crouse Health, Syracuse

EXECUTIVE SUMMARY

Perinatal mood and anxiety disorders are the number one complication of pregnancy and postpartum, affecting up to one in five women. Crouse Health is screening postpartum mothers before discharge using the evidence-based Edinburgh Postnatal Depression Scale. Mothers at risk are identified and assessed by a social worker and given support and resources, thereby increasing the likelihood they will seek help and get better sooner. A robust maternal mental health network list was created online and is maintained that includes Crouse's PMAD support program, therapists, home telehealth, public health social work and community health worker programs, online support and emergency contact information for 17 regional counties. A postpartum discharge class emphasizing signs and symptoms of postpartum depression is offered to all postpartum families. Providers are notified of mothers screening positive, providing the opportunity for discussion and earlier follow-up.

OUTCOMES ACHIEVED

- Patient satisfaction indicators for discharge information have improved.
- In 2019, 3,825 mothers were screened and, of those, an average of 8.7 were positive for PMAD.
- Social work assessment and provider follow-up in less than three weeks has improved significantly.

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Partnering with Security to Reduce the Risk for Suicide on Medical Floors

Ellis Medicine, Schenectady

EXECUTIVE SUMMARY

The risk for suicide and self-harm increases in a medical environment where access to dangerous equipment is more prevalent. Patient rooms should be designed to eliminate possible environmental elements that could facilitate suicide attempts. However, in medical units, this poses a problem when equipment needed to treat and monitor the patient may also pose a risk of harm. The overall aim of the project was to improve the safety of suicidal and bordering mental health holding patients on medical units. The goal was to do this through objective auditing and just-in-time coaching. This was accomplished through partnership with the security team. The security team performed objective live audits of staffs' performance, corrected deficits in practice that posed risk of harm and educated staff on how to improve future performance, thereby building competency. Over the 17 months the program has evolved, Ellis Medicine has reached 99% compliance with creating a safe environment.

OUTCOMES ACHIEVED

Through this initiative, Ellis Medicine:

- reduced self-harm or suicide attempt risk;
- improved the environmental safety knowledge of staff in the medical inpatient setting; and
- reduced barriers to staff creating an environment that is safe for patients at high risk of suicide or self-harm.

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Co-localization of Hepatitis C and Substance Abuse Treatment

Erie County Medical Center Corporation, Buffalo

EXECUTIVE SUMMARY

More than 2.5 million people in the United States are living with the hepatitis C virus, with those who inject drugs at the greatest risk for contracting and transmitting HCV. These individuals remain at risk if they do not receive adequate substance abuse treatment. At Erie County Medical Center's Center for Hepatology, the medical director developed an innovative model for co-localized treatment of HCV and opiate dependence to manage both comorbidities in a "treatment as prevention" approach. This model has proven to be a highly successful treatment method that incorporates community outreach, substance abuse treatment and interventions designed to meet patients in their present state of health without judgment. Success at treatment initiation and completion of HCV medication have been far higher than national averages.

OUTCOMES ACHIEVED

- Since 2012, ECMC's Center for Hepatology has treated nearly 3,000 individuals, including many actively using drugs.
- Currently, the program has a documented 85% treatment adherence rate and a 98% cure rate.
- The program has resulted in a large uptake in initiation of medication-assisted treatment for opiate dependence.

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Esperanza: Implementation of a Trauma-informed Bereavement Program for Hispanic Children and Caregivers

Good Shepherd Hospice, Melville

EXECUTIVE SUMMARY

Good Shepherd Hospice was awarded two grants that enabled the organization to provide bereavement services. This program uses a family group model and serves a highly marginalized population in Brentwood and surrounding towns on Long Island. The target population is grieving Hispanic children and their caregivers. Many of the program's participants have experienced sudden, violent loss together with other types of trauma that complicate grief, including undocumented citizenship, economic insecurity, homelessness, deportation, discrimination, gang activity, sexual abuse, substance/alcohol abuse and neglect. Goals of the children's program are to decrease their sense of isolation, normalize their experiences and feelings and assist them in developing proactive coping strategies. The adult group focuses on education and support, including understanding how a child grieves based on the circumstances surrounding the death, as well as the child's developmental level, chronological age, risk and protective factors.

OUTCOMES ACHIEVED

- Nine group programs were held.
- Fifty-seven educational programs were given.
- A culturally-sensitive camp environment was provided.

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Creating a Suicide-safer Community within a Behavioral Health Hospital

Gracie Square Hospital, New York City

EXECUTIVE SUMMARY

Implementing the ASIST/SafeTALK suicide prevention program demonstrated the utility of patient-centered, recovery-oriented interventions in an acute-care inpatient psychiatric hospital. This protocol, in conjunction with a standard suicide assessment measure (the Columbia Suicide Severity Rating Scale), allows patients receiving inpatient psychiatric services from Gracie Square Hospital to benefit from evidence-based suicide assessment and interventions. Patients' perception of care, treatment response and safety all improved as a result of these interventions. Based on these positive results, along with the notable fact that there were no suicide attempts in the hospital in 2019, the program was rolled out across all units of the 133-bed facility to provide the most effective care to as many patients as possible, while enabling clinical and non-clinical staff to feel more confident in their suicide prevention efforts.

OUTCOMES ACHIEVED

- ASIST patients were more than twice as likely to report positive perceptions of care versus controls.
- ASIST patients were two-and-a-half times as likely to report confidence in their ability to manage suicidality.
- Staff reported improved motivation, aptitude and effectiveness in suicide prevention interventions.

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Economic Impact of Early Palliative Care Intervention in a Community Hospital Setting

Kenmore Mercy Hospital, Catholic Health

EXECUTIVE SUMMARY

Kenmore Mercy Hospital performed an analysis of palliative care patients encountered for 2015 and 2016. Early intervention was defined as initiation of palliative care at three days or less after admission, and late intervention was defined as four days or more after admission. The Geisinger screening tool was initially used. Later, the Victoria Palliative Performance Scale was also utilized to identify appropriate palliative patients. Case management and the palliative care nurse champions used these tools to alert the attending physicians of the need for palliative care. The outcome of the retrospective review was impressive and the results were published. The palliative care team then used the data from the study to further educate the physicians, nurses and ancillary team on the benefits of early intervention for patients in need of palliative care. The tools are currently used across the hospital as a guide to promote an earlier palliative care consult, when indicated.

OUTCOMES ACHIEVED

- Kenmore Mercy Hospital realized a significant financial benefit by obtaining a palliative consult within three days after admission.
- The facility achieved a large reduction in length of stay when obtaining a palliative consult within three days of admission.
- The culture changed within the hospital to be more proactive for palliative care.

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Patient-centered Approach to Reduce "Code Gray" Calls — Inpatient Behavioral Health Unit

Mount Sinai South Nassau, Oceanside

EXECUTIVE SUMMARY

A "Code Gray" is called overhead to summon security manpower to a hospital location to support clinical staff in preventing harm caused by patients displaying agitated, threatening or violent behaviors. The frequency of Code Gray calls on Mount Sinai South Nassau's inpatient behavioral health unit was high and attributed to high patient acuity. Due to the frequency and added potential for injury during a Code Gray response, the care team was interested in exploring ways to reduce the number of preventable Code Gray calls to the unit. Using the Plan-Do-Study-Act method for performance improvement, a multidisciplinary team implemented several process changes to improve and sustain outcomes. These included changes in the medication administration process, enhancing the patient activities itinerary, implementing proactive rounds by the safety and security team and conducting research to identify an evidence-based tool for predicting agitated, threatening and violent behaviors.

OUTCOMES ACHIEVED

Through this initiative, Mount Sinai South Nassau:

- achieved a 72.5% reduction in Code Gray calls from 131 in 2018 to 36 in the first three quarters of 2019;
- decreased the assault rate by 63.4%, from 22% in 2018 to 8% in the first three quarters of 2019; and
- realized a 68.4% decrease in the assaults with injury rate, from 7.4% in 2018 to 2.4% in the first three quarters of 2019.

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Reduction in Emergency Room/Inpatient Overutilization by Addressing Social Determinants of Health

Nathan Littauer Hospital, Gloversville

EXECUTIVE SUMMARY

The purpose of this initiative was to focus on improving care for the inpatient and emergency room multiple-visit patient populations. Nathan Littauer Hospital's goals included reducing emergency room overutilization, reducing hospital readmissions and finding ways to connect patients to more appropriate care services and venues. To achieve these goals, the hospital designed systems that rapidly identified the target populations, focused on understanding their social determinants of health and developed care pathways with community-based resources to address many of the drivers of their high utilization, such as social isolation, low healthcare literacy, lack of transportation and mental health and substance abuse disorders. Through this endeavor, the hospital designed a sustainable care pathway that specifically addresses the unique crisis-driven, fragmented needs of MVPs and integrates services across the care continuum.

OUTCOMES ACHIEVED

Through this initiative, Nathan Littauer Hospital:

- decreased ER high utilization;
- decreased inpatient high utilization; and
- transitioned to a person-centered model that offers MVPs preventive, organized and integrated care.

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Improving Treatment Engagement — Reducing Readmissions for Behavioral Health Patients through a Continuum of Care Intervention

St. John's Episcopal Hospital, Far Rockaway

EXECUTIVE SUMMARY

St. John's Episcopal Hospital was experiencing a substantially elevated 30-day readmission rate for adult acute care behavioral health inpatients. This rate exceeded 20%, which presented significant challenges for patients, families and the hospital. Barriers included a high no-show rate among a patient population grappling with difficult social determinants of health and serious comorbidities. Follow-up appointments within 48 to 72 hours and "warm hand-offs" were instituted for inpatients to meet their outpatient providers prior to discharge and ensuring ease of access while always accommodating patients. Two years into the program, the readmission rate for adult acute care behavioral health patients has dropped from over 20% to just over 12%, well below the regional average.

OUTCOMES ACHIEVED

- The readmission rate was reduced to below regional rates.
- Patient and family satisfaction improved (inpatient 80%, outpatient 90%).
- The emergency, inpatient and outpatient behavioral health departments are significantly less siloed.

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Responding to Human Trafficking in Our Community

UR Medicine Thompson Health, Canandaigua

EXECUTIVE SUMMARY

A 2017 report from the Coalition to Abolish Slavery & Trafficking found that more than half of labor and sex trafficking survivors surveyed had accessed healthcare at least once while being trafficked. Nearly 97% indicated they had never been provided with information or resources about human trafficking while visiting a healthcare provider. Two of UR Medicine Thompson Health's sexual assault nurse examiner registered nurses, one of whom serves on the county's Sexually Exploited Youth Task Force, obtained specialized training and joined forces on mandatory training to ensure all employees understand the definition of human trafficking and can:

- differentiate between labor trafficking and sex trafficking;
- recognize myths and misconceptions;
- identify common victim presentation to healthcare;
- recognize the "red flag" indicators; and
- follow the health system's trafficking algorithm.

Training is delivered primarily online and has been reinforced through the facility's communications department via traditional methods and social media.

OUTCOMES ACHIEVED

- To date, two victims of human trafficking and two teens at high risk have been referred for help.
- The staff are poised to identify further victims who may come through the doors.
- The community has a better understanding of trafficking, realizing everyone can help stamp it out.

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Chapter 10:

Driving Treatment and Diagnostic Innovation

Opioids

Achieving Narcotic Reduction in Common Surgical Operations by Standardizing Post-operative Narcotic Prescribing

Bassett Medical Center, Cooperstown

EXECUTIVE SUMMARY

Bassett Medical Center aimed to combat the ongoing opioid crisis. Overdose is responsible for some 300 deaths per day in the U.S. The number of deaths continues to increase and 60% involve a prescription opioid. Realizing a surgical event is often a gateway to narcotic use, Bassett developed best practice guidelines that standardized narcotic prescribing in the initial post-operative prescription for common surgical procedures. Opioid prescribing post-operatively became procedure-specific and standardized to the lowest prescription opioid dose for the shortest duration possible, ensuring safe pain management while decreasing the number of pills put on the streets. By leveraging the electronic medical record, Bassett was able to track professional prescribing habits, patients getting opioids and diversion tactics. Across all procedures, Bassett prescribed 45% less narcotics during the average initial post-operative period. Prescribing reductions ranged from 14.8% to 66.4%. Essential to this emerging best practice is use of non-opioid treatment options.

OUTCOMES ACHIEVED

Through this initiative, Bassett:

- achieved a 45% reduction in the number of narcotic pills prescribed during the initial post-operative period;
- established a guideline for providers to follow on the number of pills to prescribe; and
- reduced the number of narcotics possibly ending up on the streets.

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Learning to C.A.R.E. (Consistency, Assist, Respect, Empathy) for Infants with Neonatal Abstinence Syndrome and Mothers with Opioid Use Disorder

Good Samaritan Hospital Medical Center, Melville

EXECUTIVE SUMMARY

Opioid use disorder in pregnancy and neonatal abstinence syndrome have escalated dramatically in recent years, paralleling the epidemic observed in the general population. As we learn more about the science of addiction, we are recognizing ways to improve the type and level of care given to mothers with OUD and newborns suffering from NAS. Good Samaritan Hospital Medical Center developed and implemented a standardized process for identification, evaluation, treatment and safe discharge of those affected by OUD and NAS. This was accomplished by focusing on education, providing non-judgmental care, increasing early recognition and treatment of mothers, and improving non-pharmacologic care for newborns. Success is evidenced by a decreased length of stay and medication requirement for newborns, increased screening to support mothers with OUD and timely referrals to mental health and addiction resources to start the journey toward recovery.

OUTCOMES ACHIEVED

- Rooming-in and non-pharmacologic care of newborns increased, and the need for medication decreased by 50%.
- The average length of stay for newborns decreased from 14 days to 11 days.
- Screening of all labor and delivery admissions using the 4 Ps screening tool increased.

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Multimodal Approach to Reducing the Use of Intravenous Narcotic Medication in Bariatric Surgery

St. Charles Hospital, Huntington

EXECUTIVE SUMMARY

Opioids are highly addictive, come with significant side effects and can compromise patient safety. Saint Charles Hospital's multimodal pain management strategy achieves effective pain control by using many alternative methods that work synergistically to reduce opioid administration, thereby decreasing opioid-related side effects. This approach can also improve patient progression, patient satisfaction and hospital throughput efficacy while minimizing waste and internal costs for the hospital. The purpose of this study was to investigate whether multimodal analgesia, or non-opioid pain relief, reduces narcotic consumption while maintaining quality pain management and patient satisfaction for patients undergoing laparoscopic sleeve gastrectomy (gastric sleeve) procedures, which account for 90% of Saint Charles Hospital's bariatric procedures.

OUTCOMES ACHIEVED

Through this initiative, Saint Charles Hospital:

- eliminated the use of patient-controlled anesthesia and reduced intravenous opioids by 62% from 2017;
- decreased opioid medication use across the program by 22%; and
- improved throughput from 2018 to 2019 by decreasing average discharge times by 40 minutes.

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Impact of Pain Stewardship and Palliative Care Programs on Reducing Opioid Utilization and Improving Pain Management

St. Joseph Hospital, Melville

EXECUTIVE SUMMARY

The U.S. Department of Health and Human Services officially declared the opioid crisis a public health emergency. In response, the Centers for Disease Control and Prevention and The Joint Commission recommended hospitals curb the use of opioid analgesics by implementing opioid or pain stewardship programs. According to the National Quality Forum, the seven fundamentals of opioid stewardship are promoting leadership commitment and culture; implementing organizational policies; advancing clinical knowledge, expertise and practice; enhancing patient and family caregiver education and engagement; tracking, monitoring and reporting performance data; and establishing and supporting collaboration with community leaders and stakeholders. The goal of this study was to create an opioid reduction program through the creation and implementation of multidisciplinary pain stewardship and palliative care programs using alternative evidence-based pain management practices and the Plan-Do-Study-Act methodology.

OUTCOMES ACHIEVED

- Opioid administrations decreased 4.9% and inpatient naloxone administrations decreased by 51.2%.
- Acetaminophen use increased 87% while NSAID use increased by 55.3%.
- A 56-fold increase in warm packs was noted and use of cold packs increased 43.9%.

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Reducing the Risks of Neonatal Abstinence Syndrome through an Opioid Management Program During Pregnancy

Catholic Health System, Buffalo

EXECUTIVE SUMMARY

Opioid use has increased in the United States in recent years and the literature reflects an increasing trend in opioid use among women. *The New England Journal of Medicine* (2015) reported an increase in neonatal abstinence syndrome in neonatal intensive care unit admissions from 2004 through 2013, noting that by 2013 the number had risen to 27 cases per 1,000. The objective of this program was to screen pregnant women for opioid use and link them to services earlier in their pregnancies, thereby reducing the impact on their newborns. This initiative was implemented across the entire organization and resulted in shorter lengths of stay for newborns with neonatal abstinence syndrome.

OUTCOMES ACHIEVED

- The length of stay for newborns with neonatal abstinence syndrome decreased.
- The number of prenatal visits for the expectant mother increased.
- The number of gestational days before the first prenatal visit decreased.

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Decreasing Opioid Deaths — A New Approach

Long Island Community Hospital, Patchogue

EXECUTIVE SUMMARY

Long Island Community Hospital's local community had high rates of patients with substance use disorder and opioid overdose deaths. The goal of this initiative was to develop a program to screen all patients, identify substance use issues, initiate medication-assisted treatment in the emergency department with scheduled follow-up appointments and ensure that reversal (Naloxone) kits were given to patients and families. A full multidisciplinary team, led by hospital administration and comprised of addiction specialists, physicians, ED providers, social workers, nurses, residents and outpatient chemical dependency services used the Plan-Do-Study-Act methodology. The project included developing and implementing evidence-based screening and assessment tools, coordinating with community and outpatient programs and services, and determining and implementing appropriate training and staffing models.

OUTCOMES ACHIEVED

- Opioid overdose mortalities declined 45% from 2017 to 2018.
- The number of positive substance use screens in the ED increased 102% from 2017 to 2019.
- The number of follow-up appointments scheduled increased 164% from 2017 to 2019.

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Promoting Opioid Stewardship through Systematically-designed Simulation-based Training

Maimonides Medical Center, Brooklyn

EXECUTIVE SUMMARY

The opioid crisis is a public health emergency. Opioid stewardship programs are an emerging concept to combat opioid misuse. Significant barriers to implementing formalized OSPs are longstanding stigma and healthcare providers' misconceptions about patients suffering from opioid addiction. Maimonides Medical Center developed and implemented a novel simulation-based training module for emergency medicine attending physicians to overcome misconceptions around opioid use disorder by participating in realistic scenarios using standardized patient actors. Objectives included:

- learning best practices around prevention, treatment and harm reduction techniques in OUD;
- deliberate prompts to propose practical improvements in personal practice patterns; and
- empowering attendings to solidify best practices into an overarching operational framework for an OSP.

OUTCOMES ACHIEVED

- Prescribed opioids decreased from 49% to 19%.
- The number of buprenorphine prescriptions to treat OUD increased.
- Provider empathy and communication strategies to treat and reduce harm in OUD improved.

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Addressing the Opioid Crisis through Non-Opioid Post-operative Pain Management

Montefiore St. Luke's Cornwall, Newburgh

EXECUTIVE SUMMARY

Recognizing the role that prescription medications play in the opioid epidemic, Montefiore St. Luke's Cornwall chose to implement evidence-based standards of practice that promote the replacement of opioids with non-opioid pain management options for the post-operative orthopedic population. The goal was to decrease the amount of opioids prescribed to patients. This was achieved through interdisciplinary collaboration by revising the post-operative orthopedic standard order sets to replace the usual total joint pain management regime of Percocet and Dilaudid with the three "Ts": Tylenol routinely every six hours, Tramadol every six hours and Toradol every six hours as needed for breakthrough pain. A balancing measure to include routine patient pain assessments was enforced and tracked to ensure that all patients' pain was well managed.

OUTCOMES ACHIEVED

Through this initiative, Montefiore St. Luke's Cornwall:

- achieved a 61% decrease in the use of opioids to manage post-operative pain from September 2018 to August 2019;
- realized a 33% decrease in the average length of stay for total knee replacement and a 44% decrease for total hip replacement from September 2018 to August 2019; and
- increased discharges to home for total knee and total hip replacements by 16% and 33%, respectively.

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Narcan Distribution Program

NYC Health + Hospitals/North Central Bronx

EXECUTIVE SUMMARY

Because of the nationwide opioid addiction and overdose crisis, prevention of opioid overdose in the Bronx, which has been disproportionally affected by deaths from overdose, is a significant public health matter. The goal of this program was to prevent opioid overdoses in the community by distributing Narcan kits to people who could potentially come in contact with opioid overdose victims. The goal was to distribute 150 kits over 15 months from December 2018 to February 2019. This was done by educating staff and the community on how to use the kits and by operationalizing the distribution in a community hospital setting.

OUTCOMES ACHIEVED

- Individuals were educated on the administration of Narcan for opioid prevention.
- Narcan kits were distributed from the opioid overdose prevention program.
- Tracking of Narcan kits dispensed improved.

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Decreasing Exposure to Opioids after Bariatric Surgery

Northern Dutchess Hospital, Rhinebeck

EXECUTIVE SUMMARY

Over 50% of people who reported misusing prescription pain relievers obtained the medication from a family member or friend for free. Misuse of prescription pain relievers can lead to addiction, overdose or death. In 2015, there were 20,101 deaths in the United States related to prescription pain reliever overdoses. Northern Dutchess Hospital's goal was to optimize post-operative pain management while simultaneously ensuring that the program is not a source of superfluous opioids in the community. The hospital incorporated non-opioid pain management techniques, including pre-medication, use of nerve blocks and scheduled non-opioid pain medications, as well as patient education and expectation management to control post-operative pain. Patients were queried during routine post-operative telephone calls about the quantity of pain medication used after surgery. Data were reviewed and prescribing was adjusted based on patient feedback.

OUTCOMES ACHIEVED

- Opioid use data empowered prescribers to decrease the number of opioid pills prescribed to each patient.
- Use of all available non-opioid pain management techniques can significantly reduce the need for opioids.

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A Multimodal Opioid-sparse Pain Protocol

NYU Langone Orthopedic Hospital, New York City

EXECUTIVE SUMMARY

A multimodal opioid-sparse pain management protocol for orthopedic surgical patients provides equivalent outcomes to traditional pain management, thereby reducing patients' exposure to potential opioid-related side effects. Patient candidacy and the overall efficacy of the protocol may be limited by certain medical comorbidities, individual pain tolerance and preexisting patient opioid use. The standardized protocol has proven effective and favorable in the large majority of patients, as evidenced by the positive change in the patient satisfaction composite domain for communication about pain.

OUTCOMES ACHIEVED

Through this initiative, NYU Langone Orthopedic Hospital:

- increased the patient satisfaction composite domain for communication about pain from 75% top box in the first quarter of 2018 to a high of 82% top box in the third quarter of 2019;
- standardized an opioid-sparing, multimodal pain management practice; and
- improved patient safety through the use of an opioid-sparing, multimodal pain management protocol.

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Reducing Opioid Exposure in the Emergency Department through an Evidence-based Approach to Pain Management

Samaritan Medical Center, Watertown

EXECUTIVE SUMMARY

Prescription opioid-related deaths are the leading preventable public health problem in the United States. Samaritan Medical Center understands the link between opioid prescribing and opioid addiction. With the purpose of reducing the prescription of opioids by 15%, the emergency department implemented complaint-specific, multimodal pain management protocols that used non-opioid medications as a first line of treatment. A year after implementation, the number of patients treated with opioids in the emergency department decreased by 50%. The number of prescriptions written for patients discharged from the emergency room also decreased by 50%.

OUTCOMES ACHIEVED

- Exposure of ED patients to opioids decreased.
- The community is better educated regarding the risks inherent to prescription opioids.
- The culture changed within ED with new focus on using opioids as a last resort for common complaints.

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Improving Outcomes, Decreasing Costs and Dramatically Reducing Opioid Prescriptions through Robotic Surgery and Center of Excellence Approach

UR Medicine Thompson Health, Canandaigua

EXECUTIVE SUMMARY

The 2017 National Survey on Drug Use and Health showed an estimated two million Americans had misused prescription pain relievers for the first time within the previous year. This averages out to approximately 5,480 initiates per day. It is widely accepted that surgery is often a gateway to long-term opioid use and potential misuse. Thompson Health's general surgeons are committed to significantly limiting the number of opioids prescribed for post-operative pain in one of UR Medicine Thompson Health's most commonly-performed operations — hernia repair. The unique approach involves robotic-assisted hernia repair and a novel pre- and post-operative pain control regimen. Several studies show 20 narcotic tablets are the minimum typically prescribed following an open hernia repair but, in addition to performing robotic-assisted repairs, UR Medicine Thompson Health's surgeons educate patients about what to expect post-operation, emphasizing there will be some discomfort but that the standardized regime will involve non-narcotic medication.

OUTCOMES ACHIEVED

- The facility saw a 95% drop in narcotic pain control used within 30 days of inguinal hernia operations.
- There was a 75% drop in hematomas and seromas and a 70% drop in hernia recurrences.
- After presentations from one of the hospital's surgeons, the program has been scaled to hospitals in eight states.

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Chapter 11:

Driving Treatment and Diagnostic Innovation

Sepsis

Sepsis Improvement Initiative

Lewis County Health System, Lowville

EXECUTIVE SUMMARY

Since 2016, early management bundles for severe sepsis and septic shock within three hours of presentation were below targeted goals. The purpose of the sepsis improvement initiative was to improve care priority of septic patients through early recognition and appropriate treatment. The goals of the initiative were: 100% early recognition of all patients presenting to the emergency department and patients admitted to three inpatient units; 100% three- and six-hour bundle compliance; and 100% shock fluid resuscitation bolus and documentation. Methods implemented included emphasis on education and communication, including TeamSTEPPS® and a nurse-driven sepsis alert protocol. Technology was used through the use of screening tools, surveillance program order sets and metric tracking.

OUTCOMES ACHIEVED

- Sepsis bundle three-hour and six-hour compliance reached 100%.
- Timely crystalloid administration has reached 100% for six out of 12 months.
- Thirty-five out of 70 sepsis alerts called in three months met severe sepsis or septic shock criteria.

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Implementation of a Sepsis Checklist to Improve Sepsis Bundle Adherence

NewYork-Presbyterian Lower Manhattan Hospital, New York City

EXECUTIVE SUMMARY

NewYork-Presbyterian Lower Manhattan Hospital's emergency department implemented a sepsis checklist to improve adherence to the sepsis bundle. The goals of the project were to increase staff knowledge of sepsis bundle components, prioritize timely care delivery to the septic patient, ensure completion of all sepsis bundle components and improve communication and hand-off between interdisciplinary team members. Interventions included education on sepsis and the sepsis bundle and development and rollout of a sepsis checklist.

OUTCOMES ACHIEVED

- Staff awareness of the sepsis bundle increased.
- Communication among departmental team members regarding completion of the sepsis bundle improved.
- Adherence to the sepsis bundle improved.

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Reliable Sepsis Care: Innovative New Tools to Improve Bundle Compliance and Mortality

NYU Langone Hospital – Brooklyn

EXECUTIVE SUMMARY

High-quality, reliable sepsis care requires a team-based approach where leadership empowers and supports those at the bedside. NYU Langone Hospital transitioned to a culture in which nurses initiate sepsis care and lead the team to achieve timely completion of bundled care in collaboration with providers. To best support this culture, the hospital engaged all departments involved in the care of sepsis patients, examined their roles on the team, identified and addressed their workflow barriers and refocused efforts on patient care and patient outcomes. The hospital worked with informatics to develop an electronic medical record tool that encourages and enables nurses and providers to complete all aspects of the sepsis bundle in a timely manner. Interventions implemented to improve sepsis care included electronic medical record optimization of "Sepsis Narrator/Navigator," incorporation/rebuild of second antibiotic administration into EMR development, use of the bedside sepsis checklist and department sepsis chart review feedback within 72 hours.

OUTCOMES ACHIEVED

- Sepsis mortality decreased from 44% in the first quarter of 2015 to 8% in Q4 2018 and has been sustained below 15%.
- Broad spectrum antibiotics are given to 95% of sepsis patients within one hour.
- EMR utilization of sepsis workflow expanded hospital-wide.

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A Multidisciplinary Approach to Improving Mortality Related to Severe Sepsis and Septic Shock

Oneida Health

EXECUTIVE SUMMARY

In an effort to address mortality rates and sepsis compliance, Oneida Health formed a sepsis core team that met every two weeks. The goal was to improve compliance with the sepsis bundles and reduce mortality related to sepsis. To accomplish this, Oneida Health:

- developed a "Quick Pick" condensed order set that allows clinical staff to start treating sepsis sooner;
- began clinical huddles with staff to promote leadership and improve awareness;
- created a paper checklist to strengthen communication during hand-off and remind nursing staff of the required bundle elements;
- completed an electronic health record optimization to auto-repeat an elevated lactate;
- began provider counseling by the emergency department director and chief medical officer to improve accountability and enhance education;
- developed a sepsis dashboard to track and trend fallouts, as well as to promote sustainability and demonstrate growth to leadership; and
- implemented and adhered to a bedside shift report.

OUTCOMES ACHIEVED

- Mortality dropped from 17.6% in 2018 to 15.3% in 2019, which was below the New York state rate of 22.9%.
- SEP-1 bundle compliance rose by 22% from 59.6% in 2018 to 72.7% in 2019, which was above the New York state benchmark.
- Clinical staff are champions for early, comprehensive and exceptional care for patients with sepsis.

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Chapter 12:

Driving Treatment and Diagnostic Innovation

Antimicrobial Stewardship

Emergency Department Penicillin Allergy Assessment Initiative

Good Samaritan Hospital, Huntington

EXECUTIVE SUMMARY

The Joint Task Force representing the American Academy of Allergy, Asthma & Immunology determined that 10% of all patients in the United States report an allergic reaction to penicillin but less than 1% are truly allergic. Failure to perform a thorough investigation of a penicillin allergy is associated with suboptimal antibiotic therapy, increased length of stay and associated costs, increased risk for resistance and negative patient outcomes. Incomplete and inaccurate penicillin allergy history and documentation obtained during emergency department triage at Good Samaritan Hospital was identified. This documentation was maintained across the continuum of patient care. The hospital's aim was to improve the documentation in the electronic health record by obtaining a detailed penicillin allergy history and updating the EHR, as necessary, thereby positively impacting patient care and outcome. The Plan-Do-Study-Act method was used along with evidence-based practices to optimize patient treatment.

OUTCOMES ACHIEVED

- Updates were made to 79% of charts.
- Penicillin was given to 40% of those patients who reported a penicillin allergy and 100% tolerated the medication.
- There was a significant decrease in the use of levofloxacin, a penicillin alternative.

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Community Hospital's Sustained Reduction of Hospital-onset *Clostridium Difficile* through Multimodal Multidisciplinary Performance Improvement

Montefiore Nyack Hospital

EXECUTIVE SUMMARY

Hospital-onset *Clostridium difficile* infections can significantly increase patient length of stay and hospital costs. Montefiore Nyack Hospital is a 391-bed community acute care hospital approximately 30 miles from New York City that has historically experienced HO-CDI rates at or above state average. With the goals of reducing HO-CDI rates and improving patient outcomes, the hospital developed a multidisciplinary team approach involving the antibiotic steward program, infection prevention and environmental services. This approach resulted in a sustained reduction in HO-CDI rates since 2017.

OUTCOMES ACHIEVED

- Since 2017, the HO-CDI incidence rate has remained significantly lower than the New York state average, with the 2018 rate at 1.2 per 10,000 patient days and a sustained reduction in 2019.
- Timeliness of broad to narrow spectrum antibiotic use improved.
- Appropriate *C. diff* testing increased.

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Chapter 13:

Driving Treatment and Diagnostic Innovation

Diabetes

The Use of an Assessment Tool to Decrease Readmissions of Patients with Diabetes: An Interdisciplinary Approach

Mount Sinai South Nassau, Oceanside

EXECUTIVE SUMMARY

According to the latest statistics from the Centers for Disease Control and Prevention, more than 100 million adults in the United States are living with diabetes or prediabetes. Diabetes is a serious disease that can often be managed through physical activity, diet and medications to control blood sugar level. Home healthcare professionals are an increasingly essential part of the daily management of patients with diabetes. Mount Sinai South Nassau aimed to reduce readmissions of patients with diabetes, specifically due to hypoglycemia or hyperglycemia. Using the Plan-Do-Study-Act method, a multidisciplinary team was convened to identify best practices to improve outcomes and reduce re-hospitalizations for patients with diabetes. An assessment tool was formulated, staff received training and best practices were implemented. Ongoing compliance with protocols is validated during home visits and medical record review. Data are monitored regularly to support continuous improvement.

OUTCOMES ACHIEVED

- Readmissions of diabetic patients due to hypoglycemia or hyperglycemia decreased.
- The readmission risk was reduced through early identification of and intervention for symptoms of hypoglycemia or hyperglycemia.
- Communication between patients and the healthcare team improved.

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Initiative to Reduce Insulin-induced Episodes of Hypoglycemia

Nathan Littauer Hospital, Gloversville

EXECUTIVE SUMMARY

Since 2015, the most common adverse drug reaction at Nathan Littauer Hospital was hypoglycemia secondary to insulin administration in the treatment of diabetes. With strong senior level support, a multidisciplinary team was assembled that included hospitalists, pharmacists, dieticians, nurses, nurse educators and nurse informaticists. The team identified that there was no standard physician order set or standardized practice available for the management of diabetes. A hypoglycemic treatment protocol was implemented, including documentation screens that allow for easy review and audit by the care team, and education was provided to all nursing staff and hospitalist team members across the institution. Today, a multidisciplinary team reviews all hypoglycemic events as they occur, whenever possible, or retrospectively to identify causes and possible opportunities for improvement or reeducation.

OUTCOMES ACHIEVED

- Hypoglycemic events were reduced by 87%.
- Nathan Littauer Hospital developed and implemented a standardized prescriber order set and hypoglycemic protocol.
- The hospital implemented a nurse-driven, anti-hypoglycemic protocol.

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