







# Award

**Vancomycin Reduction** 

# QuILT

**Quality Improvement Leadership Training Launches** 

**CAUTI**

**4 Years No CAUTI in the SCU** 



PICU goes

**1+ Year**

**without a CLABSI** 

**36%**  
**DART**   
**Reduction**

**Days Away, Restricted or Transferred**

**75%**   
**Reduction of  
CLABSI  
In the CICU** 

**Robo-Calls  
Increase  
Reach Rate  
7.8X  
Post Discharge** 

**17%**   
**Reduction  
Sharps Injuries** 

**34%**  
**Decrease  
in Falls** 

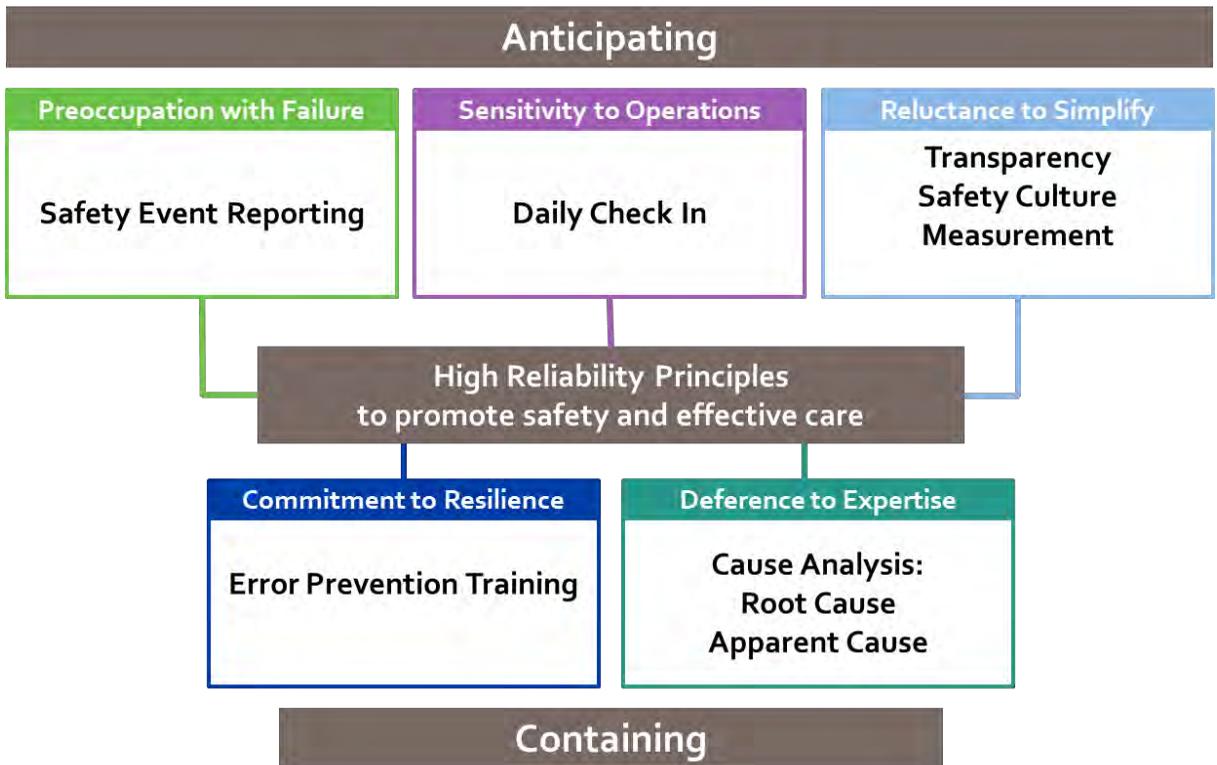
**50%**    
**Reduction  
Severe Injuries  
Overexertion**



# Leveraging Innovation

## High Reliability

High reliability organizations (HRO) are those that operate within complex and high-risk systems but experience very few serious or catastrophic events. HROs embrace five principles: deference to expertise, sensitivity to operations, preoccupation with failure, reluctance to simplify, and a commitment to resilience. Operating under these principles allows HROs to anticipate risks and contain unanticipated events quickly. Children’s National is on a journey to high reliability by embedding these five principles into our operations and overall safety culture.



# Using Robo-Calls to Reduce Readmissions

Hospital readmissions add \$41.3 billion to United States hospitals' costs each year.<sup>1</sup> Studies have shown that effective discharge planning and patient follow-up after initial hospital visits reduce the chances of patients' hospital readmissions.<sup>2</sup> The focus on hospital readmissions has pushed the conversation to consider the patient's experience both in the hospital and after. As expectations for follow-up and care management continue to reach beyond our hospital walls, the Readmissions Team took a major step towards proactively assessing our patients' post-discharge needs and addressing issues that could lead to readmission.

Historically, post-discharge outreach has been a time-consuming effort conducted by our Clinical Resource Management Associates, with variable reliability and reaching only 5% of parents whose children were discharged. In spring 2019, we launched a pilot on the 7 East Medical Care Unit to implement an automated post-discharge follow-up call within 24 hours. With a 60% response rate, we are identifying opportunities for earlier intervention and have already seen an association with decreased readmissions.

In October 2019, the program expanded to all inpatient units. Implementing this automated call system improved our process reliability and engagement with families. The system generated calls for 100% of patients discharged to home and recorded a reach rate of 56%. The readmissions rate for these children was 3.2% versus 5.4% for children whose parents could not be reached. This represents the most engagement with recently discharged patients and families in a single month, and we aim to leverage this engagement to reduce unplanned readmissions.

**Robo-Calls  
Increase  
Reach Rate  
7.8X  
Post  
Discharge**

## What Parents are Asked During Children's National Robo-calls

Since you left the facility, would you say your child's health is better, worse or about the same?

Do you have any questions about your child's follow-up process or care instructions that we have provided? Say yes or no.

Do you have any questions about any of your child's medications? Say yes or no.

Has your child's follow-up appointment been scheduled? Say yes or no



1. Bryant M. AHRQ eyes role for primary care in reducing hospital readmissions. *Healthcare Dive*. February 14, 2017. Available at: <https://www.healthcaredive.com/news/ahrq-eyes-role-for-primary-care-in-reducing-hospital-readmissions/436108/>. Accessed January 27, 2020.

2. Harrison PL, Hara PA, Pope JE, Young MC, Rula EY. The impact of postdischarge telephonic follow-up on hospital readmissions. *Population Health Management*. February 2011;14(1):27-32.



## Leveraging Innovation

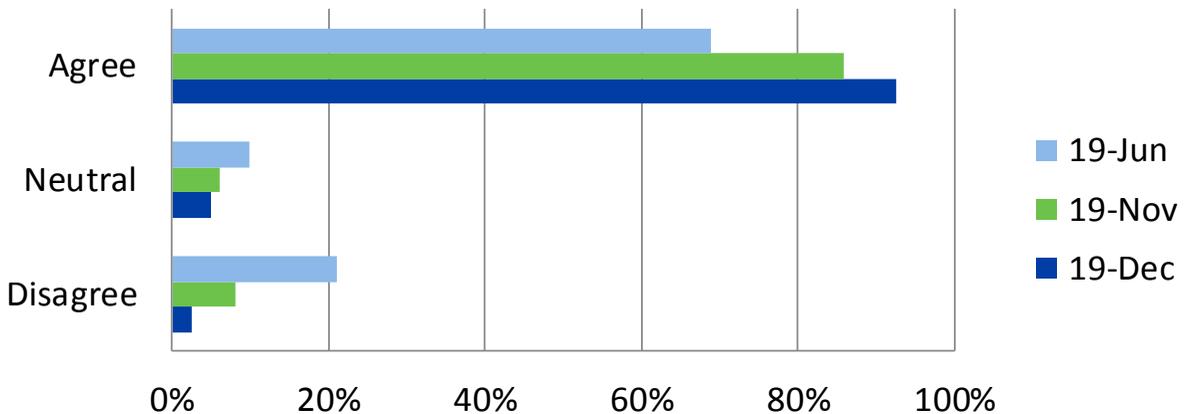
"There seems to be a real focus on servicing the issues quicker and getting them resolved which is nice for those in need."

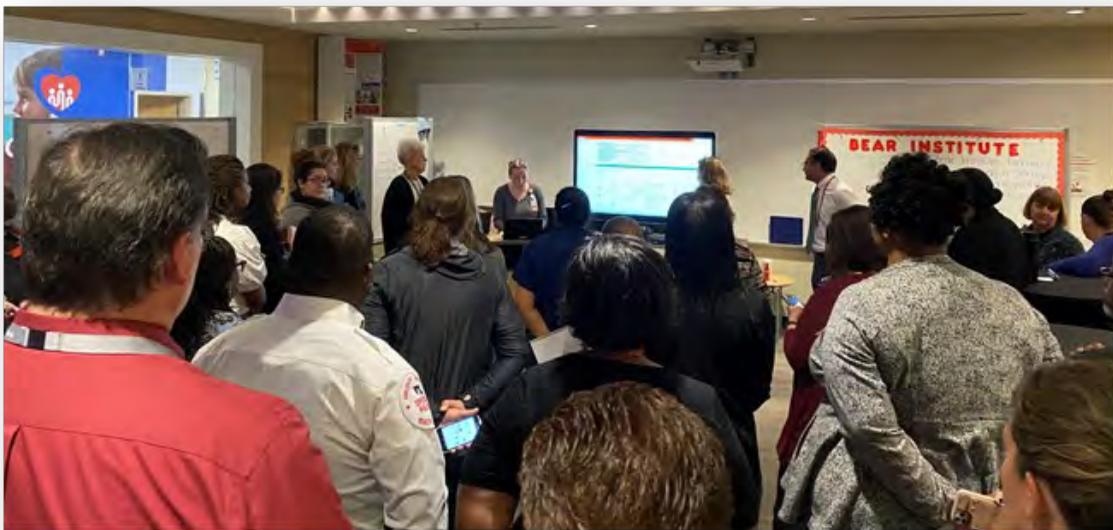
"Awesome - love seeing colleagues. Appreciate the face time. Excellent job redesigning a stale system."

## Resolving Safety Issues Real Time - Daily Check In

A daily safety briefing for situational awareness and risk identification is a foundational tool for high reliability organizations. Leaders initiated a Daily Check-In (DCI) call in 2011 as a structured report out of clinical and operational areas for the purpose of escalating risks and resolving safety issues. While the DCI call was an effective tool for reporting issues, the process lacked a structure for accountability and closing-the-loop on how issues were addressed. Many participants did not agree that the call promoted real-time resolution of issues. Therefore, in November 2019, the DCI was revamped, and the call transitioned to an in-person huddle format. Facilitated by the Administrator on Call, the process remains a brief, structured report from clinical and operational areas. A new DCI SharePoint site with an Outstanding Issues List is displayed for all to see, and it is reviewed and updated daily to support issue tracking, accountability, and follow-up. Face-to-face dialogue promotes reporting of issues, real-time solutions, and meaningful discussion around safety risks. Since initiating the new process, there has been a 24% increase in participants who report that the DCI is effective in resolving issues in real time.

### The DCI is effective in resolving issues in real time?





Leaders from throughout the hospital gather every weekday at noon to resolve safety and quality concerns. Greater visibility and in-person attendance allows for real-time problem solving.



## The Pediatric Triggers Program

A patient's electronic health record (EHR) is full of data: patient's demographics, vital signs, medications received, providers they encountered, and much more. Modern technology enabled us to use these data to help providers identify how the patient is doing and respond accordingly. On a system-level, making sense of these data becomes important to identify any patterns and trends and conduct improvement work.

Our Pediatric Triggers Program uses sophisticated computer algorithms to automatically extract EHR data. Based on pre-programmed criteria, the computer system automatically flags patients that may have had a potential adverse event. The Triggers Program Coordinator reviews these flagged patient events and shares a report of these events with clinical leaders throughout the hospital. Clinical teams then have a list of potential events at their fingertips and are able to conduct event reviews within hours.

Triggers Program focus areas for 2020 include sedation, late rescue prevention, and nephrotoxic acute kidney injury prevention.

# Reducing Hospital Acquired Conditions

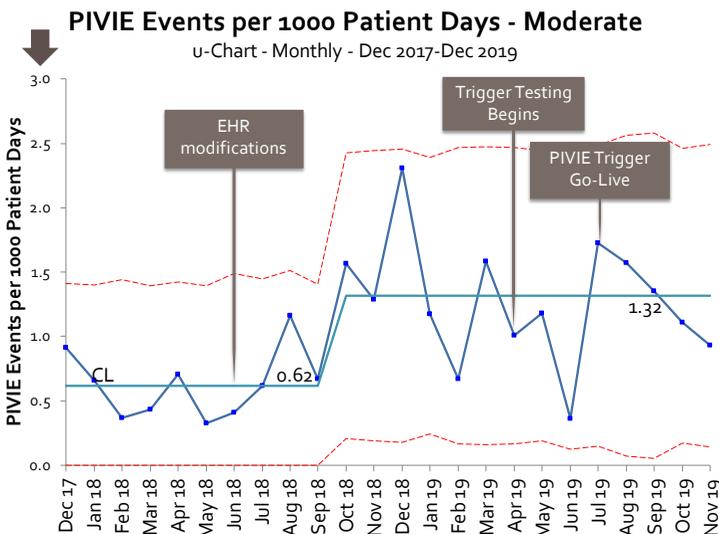
## Improving Surveillance of PIVIE

Children’s National Peripheral IV Infiltration and Extravasation (PIVIE) Prevention Team created an innovative surveillance system that effectively tracks our PIVIE events.

Peripheral IVs are short tubes that are inserted in a patient’s vein, typically in the arm, and help healthcare providers administer fluids and medication. Sometimes, the IV may be inadvertently placed outside the vein causing fluids to be delivered in the tissue outside the vein causing a PIVIE. PIVIE can cause patient harm, especially in pediatric patients who possess smaller and weaker blood vessels, immature skin, or are constantly moving.<sup>1</sup> The PIVIE Prevention Team believed that events were underreported, impacting our ability to identify appropriate areas for improvement.

The team worked with information technology/Cerner to include PIVIE as a field in the electronic medical record. The teams also partnered with our Pediatric Triggers Program to add a daily automatic surveillance

report. Cases were subsequently reviewed and reported as safety events. By combining multiple databases into one, the team increased its reporting twofold. Our understanding of PIVIE rates improved as the number of reported cases increased and led to appropriate quality improvement. These QI efforts have shown a decreasing trend for moderate events since July 2019.



## Surgical Care Unit Achieves 4 Year CAUTI-free Milestone

The Surgical Care Unit (SCU) reached a critical milestone. From October 2015 through 2019, the SCU had zero cases of catheter-associated urinary tract infections (CAUTI), achieving the rare distinction of being "CAUTI-free" for four years.



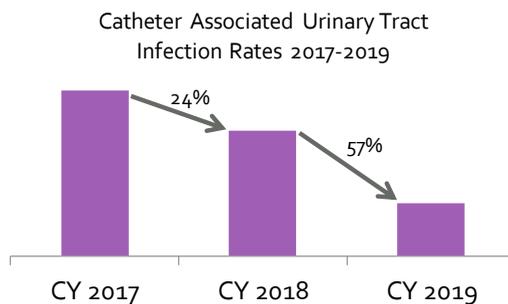
Catheter-associated urinary tract infections are the most common type of healthcare-associated infection.<sup>1</sup> A urinary catheter is a tube inserted into a bladder through the urethra to drain urine. Patients unable to void may be required to be catheterized. Between 15-25% of hospitalized patients receive urinary catheters during hospital stay. The most contributory risk factor for developing a CAUTI is prolonged use of urinary catheter.

The SCU theme is "If you don't need it, take it out." SCU nurses practice situational awareness huddles twice a day and have ongoing engagement with the clinical teams. SCU utilizes a tool, a Kamishibai card, popularly known as K-Cards. Unit-based educators use these cards to engage staff in conversation about specific care processes and determine compliance with care guidelines.

SCU conducted quality improvement initiatives that reduced CAUTI rates as well as rates for other hospital acquired conditions, such as catheter-associated bloodstream infections and peripheral IV infiltrates. SCU shares the success of its methods to spread these best practices.



Surgical Care Unit staff celebrating 1460 days which indicates 4 years without a catheter-associated urinary tract infection.



1. Centers for Disease Control and Prevention. "Catheter-associated urinary tract infections (CAUTI)" [https://www.cdc.gov/hai/ca\\_uti/uti.html](https://www.cdc.gov/hai/ca_uti/uti.html) Catheter day is a unit of measure that indicates the sum of each day patients had a catheter in a certain timeframe.



# Reducing Hospital Acquired Conditions

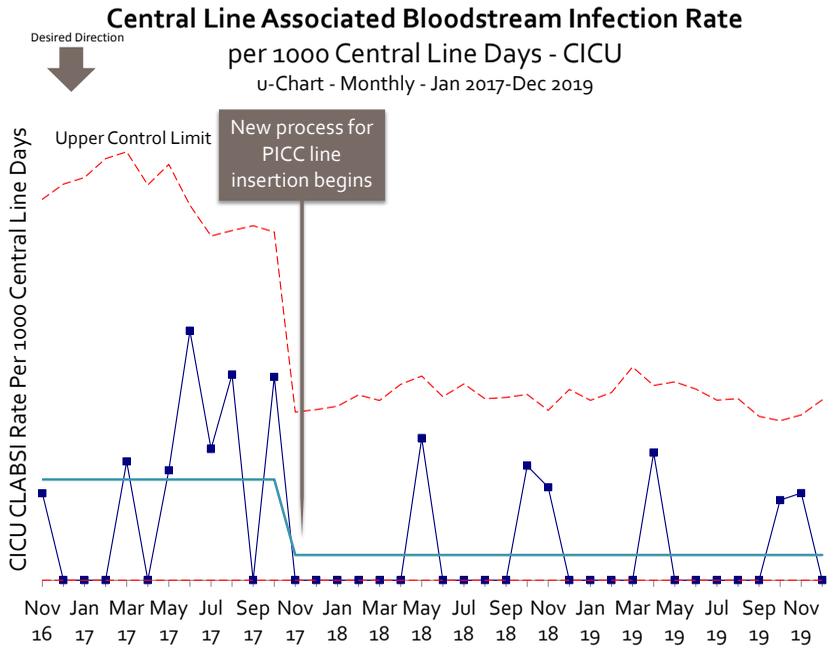


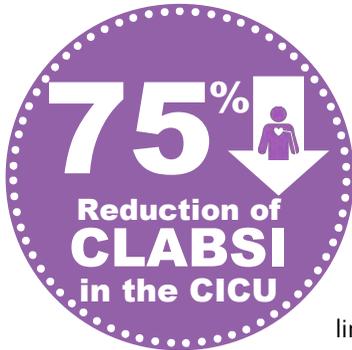
## CLABSI Reduction in the Intensive Care Units

*PICU Goes One Year without a CLABSI, and CICU sees a 75% Reduction*

Using innovative safety procedures, the multidisciplinary Cardiac Intensive Care Unit (CICU) and the Pediatric Intensive Care Unit (PICU) significantly reduced instances of central line-associated bloodstream infections (CLABSI).

A central line, also known as a central venous catheter, is a catheter that doctors often place in a large vein in the neck, chest or groin to give medications and fluids or to collect blood for medical tests. They are typically used in intensive care or hematology/oncology patients. Central lines can remain in place for weeks or months and can cause infections known as central line-associated bloodstream infections. Healthcare providers must follow a strict protocol when inserting or accessing the line.<sup>1</sup>





In 2017, the ICU’s experienced an increased CLABSI rate. Leaders launched a team of physicians and nurses to thoroughly analyze the incidence of infections from line insertion to line maintenance. Partnering with Interventional Radiology, the CICU physicians set criteria for central line insertions in the CICU. The stop, think, act, review (STAR) safety technique reduced the number of lines inserted in the unit. At the same time, the nursing teams in PICU and CICU focused education on central-line care and processes, including concentration on potential contamination during blood culture draws and reducing number of times lines are accessed. The nursing staff increased the number of audits conducted on care bundle compliance. Each audit may indicate an education opportunity to reinforce concepts of following proper and evidence-based care practices. In the last four years, the audits for CICU and PICU increased by 40%. The care compliance also increased and sustained from 73% to 85%. With the innovative approach and keeping CLABSI top of mind, the CICU achieved a 75% reduction in CLABSIs between 2017 and 2019. During the same timeframe, the PICU went 467 days without a single CLABSI.

A year without CLABSI and a 75% reduction in CLABSI events are impressive, and the 2020 challenge is to sustain these gains. The PICU and the CICU staff are engaged, monitoring the rates and processes on an ongoing basis. With the right team structure and processes in-place, we are confident that these outcomes will be sustained and spread to other units as well.

<sup>1</sup> Centers for Disease Control and Prevention. “Central Line-associated Bloodstream Infections: Resources for Patients and Healthcare Providers”, <https://www.cdc.gov/hai/bsi/clabsi-resources.html>



# Reducing Hospital Acquired Conditions

## Reducing Pressure Injuries

Pressure injuries are localized damage to skin or underlying soft tissue over a bony prominence or under a medical device. Pressure injuries can cause increased length of stay and poor patient outcomes. Children's National has a dedicated team, the Skin Team, which works on reducing hospital-acquired pressure injuries.

The Skin Team at is comprised of over 70 registered nurses and patient care technicians who collect pressure injury prevalence data monthly on all 10 inpatient units. Data are submitted to National Database of Nursing Quality Indicators (NDNQI). Prevalence data allow the hospital leaders to understand 1) how many patients have hospital-acquired pressure injuries at a set point in time each month and 2) how we compare to other hospitals.

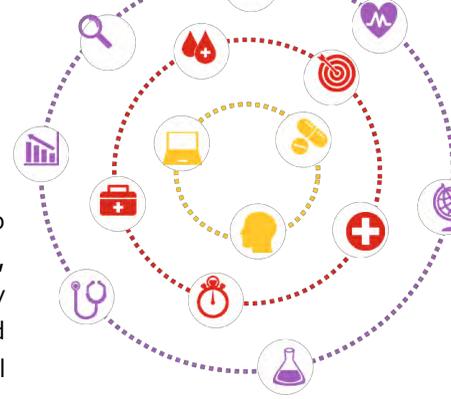
Throughout 2019, the Team focused on implementing standardized education and PI prevention strategies, especially for medical device-related pressure injury rates.

Between 2018 and 2019, the device-related pressure injury prevalence rates decreased 29%.



The Skin Team has over 70 registered nurses and patient care techs from throughout the hospital and is invaluable to safety and quality improvement efforts in the hospital.

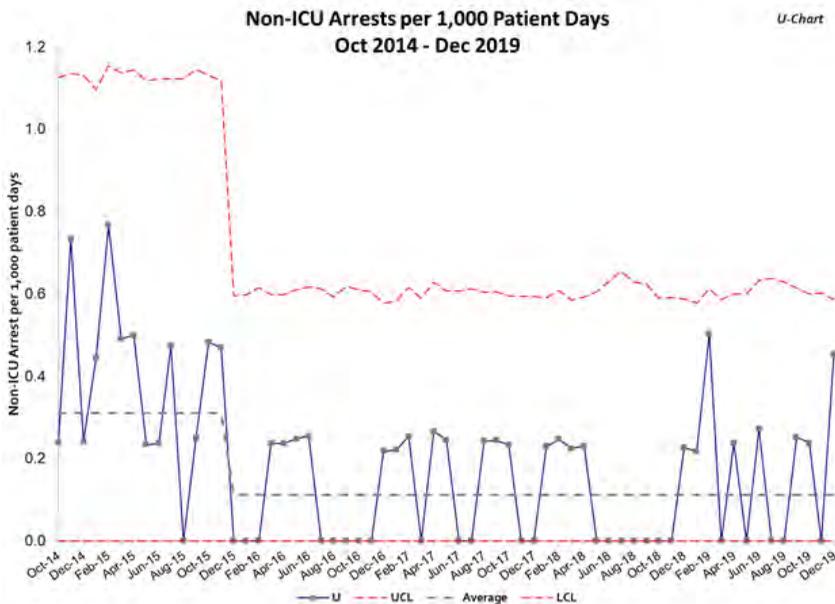
# Decreasing Codes Outside the ICU's



The Late Rescue Collaborative (LRC) continues to test new strategies to increase situational awareness, appreciation for signs of deterioration, and escalation of care. Over the past four years, the interdisciplinary team supported efforts to streamline escalation protocols, build Rapid Response Team (RRT) capacity, and implement interdepartmental clinical event reviews. Results include a sustained reduction of arrests outside the ICU by over 50% since 2016. In the last fiscal year, improvements in days between arrests outside the ICU reached a multiyear high of 219 days, and total late rescue events decreased year over year by 22%.

Moving forward, the collaborative will roll out the Safety Dashboard and begin Evening Safety Huddles in February 2020. Dr. Lisa Rickey, a current third year resident, will lead efforts to test this intervention. "Our front-line clinical providers will utilize this dashboard to improve inter-professional communication and situational awareness in a novel way on our acute care floors," said Dr. Rickey. "We aim to use these tools to identify patients at greatest risk for decompensation, to triage resources for their care, and to reduce early morning unplanned ICU transfers."

The LRC encourages clinical teams to leverage the Safety Dashboard and welcomes the opportunity to collaborate on efforts to improve our detection and escalation of care for at-risk patients.



# Reducing Hospital Acquired Conditions

## Surgical Site Infections in Appendectomy Patients

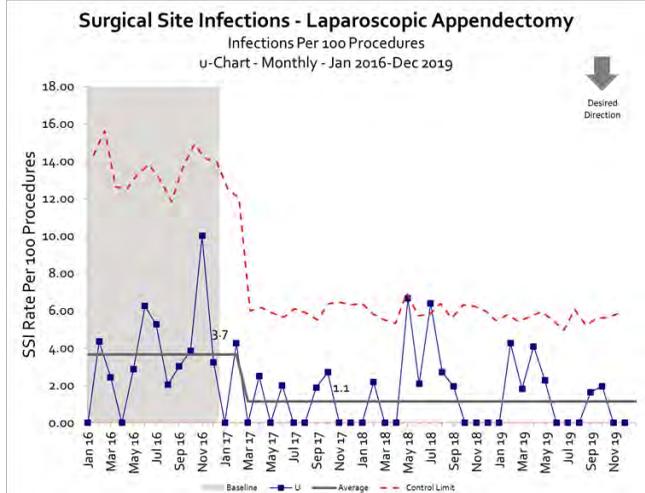
A surgical site infection (SSI) is an infection that occurs after surgery in the part of the body where the surgical incision took place. Most patients who have surgery do not develop an infection, but one study showed a 2% SSI rate in pediatric patients.<sup>1</sup>

Children's National participates in the National Surgery Quality Improvement Program (NSQIP) through the American College of Surgeons (ACS). NSQIP provides comparative data for hospitals in different surgical specialties. In 2016, NSQIP data revealed that our SSI rate for laparoscopic appendectomy was higher than the national average. The Surgical Site Infection Prevention Committee, in partnership with Infection Control, General Surgery and Perioperative Services, used a multidisciplinary approach to tackle this issue. Laparoscopic appendectomy procedures are the most common general surgery procedures at our hospital, which provided us with an opportunity for improvement that would impact a significant number of patients.

The SSI prevention team used quality improvement tools and heightened surveillance to monitor and improve the quality of care for patients undergoing laparoscopic appendectomy procedures. Using both NSQIP and Infection Control data, the team created an effective surveillance system, for which the American College of Surgeons invited us to present our work at the annual ACS Quality Conference.

The team developed key drivers to reduce SSI rates: 1) evidence-based prevention standards, 2) high compliance to prevention standards, and 3) effective perioperative management of patients. A major intervention for this program was to implement a preoperative antibiotic guideline and monitor compliance to this guideline. In partnership with the Antimicrobial Stewardship Program, the SSI leaders and general surgery teams created evidence-based guidelines for SSI prevention. Between 2016 and 2019, our hospital's rate of laparoscopic appendectomy SSI decreased nearly 70% and has been sustained for two years.

The SSI prevention team continues to monitor the rates and events to maintain a goal of less than a 3% SSI rate.



1. Bruny J, Hall B, Barnhart D. American College of Surgeons National Surgical Quality Improvement Program Pediatric: a beta phase report. *Journal Pediatric Surgery*. 2109;48(1):74-80.

# Unplanned Extubations in the NICU

Unplanned Extubations (UE), or the accidental dislodging of a patient's breathing tube, are the fourth-most common negative event in neonatal intensive care units (NICU) around the country.<sup>1</sup> Unplanned extubations can lead to airway trauma, bleeding, and cardiovascular collapse.

A NICU team found simple solutions that reduced UE rates by more than half. The team implemented changes to standardize processes, including how we tape the endotracheal tube to the child's mouth, how we position infants during X-rays, and who we include on daily rounds when the medical team discusses intubated patients' care plans. The team also implemented bedside reviews within 72 hours of an unplanned extubation to determine contributing factors, such as wet or loose tape, and reduced how often newborns received chest X-rays.

The result was a decrease in unplanned extubations by 60% over 10 years, which saved the hospital an estimated \$1.5 million per year. The NICU team not only improved safety but also lowered overall healthcare spending for the hospital. More recently, from 2018 to 2019, our UE rate decreased by 27%.



In June 2019, NICU leadership began twice weekly Endotracheal Tube rounds in an effort to prevent Unplanned Extubations. A team of an attending NICU physician, nursing leader, and respiratory therapist round on each intubated patient on the unit. They check to make sure the breathing tube is secure and that the prevention bundle is in place. The team helps resolve any concerns that may contribute to an unplanned extubation and advocates for extubation as soon as the patient is ready.



1. Galiote JP, Ridore M, Carman J. Reduction in Unintended Extubations in a Level IV Neonatal Intensive Care Unit. *Pediatrics*. 2019;143(5):1-10. doi:10.1542/peds.2018-0897.



## Days Away, Restricted or Transferred (DART)

Safety is our top priority at Children’s National Hospital. We strive to keep patients safe; but what about employees’ safety? The healthcare industry sees more staff injuries than manufacturing and construction.<sup>1</sup> In response to this alarming industry trend, we partnered with Children’s Hospitals Solutions for Patient Safety (SPS) in 2017 to develop best practices for prevention of staff injuries. Senior Leadership charged the Employee Staff Safety Committee to raise awareness and reduce injuries. Teams focus on injuries related to sharps, blood and body fluids, slips, trips and falls, verbal and physical violence, and overexertion. Since fiscal year 2017, Children’s National has experienced a 36% reduction in the serious injuries leading to days away from work or causing restricted/transferred duties. These improvements are the result of employees’ engagement in using proper safety techniques and being mindful of their own safety.

Although staff is working to make our hospital the safest place to work, employees do report workplace injuries requiring time away from work, transfer to another role or restricted duties until they recover. Occupational Safety and Health Administration (OSHA) requires that employers track and report these DART injuries.



<sup>1</sup> United States Bureau of Labor and Statistics (2018). Highest incidence rates of total nonfatal injury and illness cases report.

# Safe Patient Handling and Movement

Moving people and heavy equipment are two of the leading causes of injury to healthcare workers, yet these risks are frequently accepted as part of the status quo.<sup>1</sup> In an effort to combat this industry trend, Children’s National launched a Safe Patient Handling and Mobility (SPHM) program in 2017.



According to SPS, the National Institute for Occupational Safety and Health (NIOSH) recommends lifting no more than 16 kg (35 lbs) under the best ergonomic conditions. NIOSH research shows that using proper body mechanics alone is ineffective at preventing overexertion injuries.

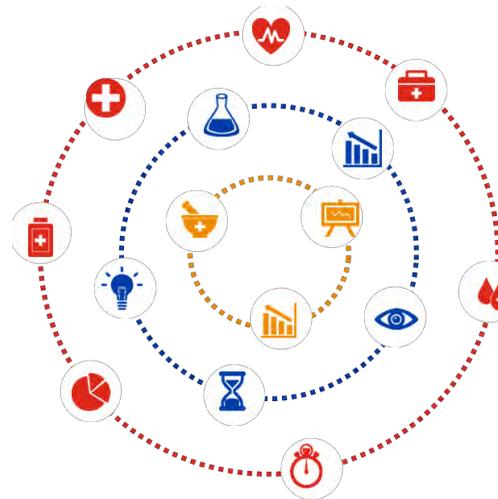
Safe patient handling equipment, like mechanical patient lifts, friction reducing slider sheets, and HoverMatts, are the industry standard for lifting and moving patients. The Overexertion Team is implementing the overexertion injury evidence-based care bundle, based in part on NIOSH recommendations, which emphasizes the use of SPHM equipment. The bundle is a set of practices that are performed together consistently to improve staff safety. 2019 overexertion injury data show a 50% decrease in severe injuries from lifting and moving patients, in part from employees’ use of safe patient handling equipment and requesting assistance when moving a patient or heavy equipment.

**zero in on zero harm**
**Employee/Staff Safety HAC**  
Overexertion

Observation: Identify a care provider for a patient who has a weight  $\geq 16$  kg AND has a Braden Q Mobility score of Completely Immobile, Very Limited, or Slightly Limited.

SPHM Rounding	Bundle in Action (Y/N)	Comments
1. The patient is $\geq 16$ kg.	Y N	
2. The patient has mobility impairments. Braden Q Mobility is documented as <div style="font-size: x-small; margin-left: 20px;"> <ul style="list-style-type: none"> <li>- completely immobile or</li> <li>- very limited or</li> <li>- slightly limited.</li> </ul> </div>	Y N	
3. The patient needs help moving (boost, rotate, lift, transfer, or reposition). If no, please identify a different patient.	Y N	
4. Assistive equipment was available.  <div style="font-size: x-small; margin-left: 20px;">           Ceiling Lift   Floor Lift   Hover Matt   Other _____         </div>	Y N	
Or, no assistive equipment was available. Team lift performed with the correct number of staff according to the Safe Lift Equation.  <div style="font-size: x-small; margin-left: 20px;">           Safe Lift Equation             Weight of patient (kg)/16 = Number of caregivers (round up)         </div>	Y N	

Unit \_\_\_\_\_ Month \_\_\_\_\_



<sup>1</sup> Occupational Safety and Health Administration. (n.d.). *Worker safety in hospitals: Caring for our caregivers*. Retrieved from <https://www.osha.gov/dsg/hospitals/index.html>



## Preventing Violence Injuries

We define violence in the workplace as an altercation or the threat of an altercation between two employees or between an employee and visitor/patient. The team, led by Security Services, tracks incidents of verbal and physical violence with a goal of implementing interventions aimed at preventing future violence in the workplace.

A number of employee injuries result when providing care to disruptive patients in behavioral health areas. To reduce these injuries, we educated staff and our Special Police Officers in "Handle with Care" which teaches verbal and non-verbal interventions. Security also conducted joint exercises in care of disruptive patients with staff on the Psychiatry units. Training in restraint techniques focused on patient and staff safety. Security partnered with Cerner/Information Technology staff to create alerts for the electronic medical record of patients that previously demonstrated combative or aggressive behavior.

### Processes implemented to improve staff safety in violent situations:

- Trained safety attendants in de-escalation
- Security partnering with Psychiatry units' staff
- Conducted tabletop drills and simulations on aggressive patient response
- Purchased Kevlar sleeves as personal protective equipment



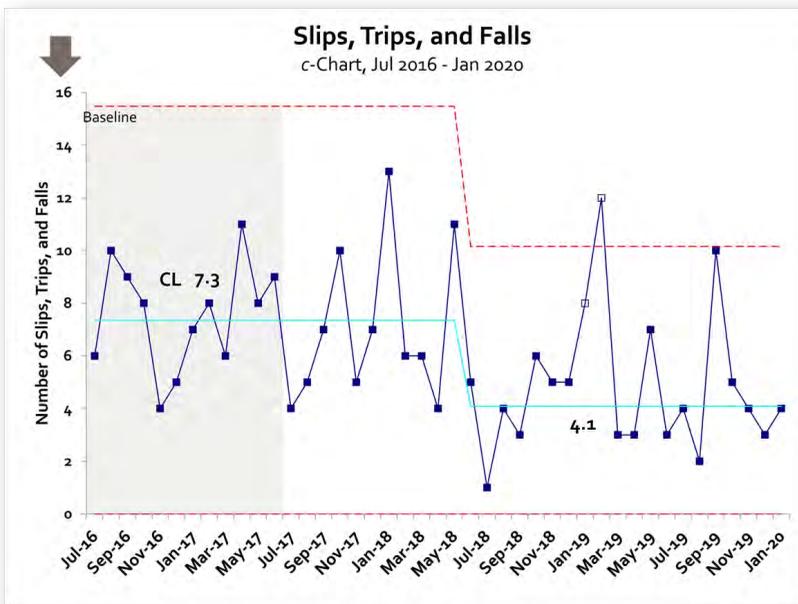


## Commitment to Safety



### Slips, Trips and Falls

Slips, trips and falls are the most frequently occurring, yet preventable, injuries in the workplace.<sup>1</sup> Since 2017, the Employee and Staff Safety Steering Committee focused on decreasing employee slips, trips, and falls. A working team, led by the Environmental Services Director Nick Mantasas, reviewed the baseline data to determine the highest risk areas for falls throughout the organization. Interventions centered on preventing falls related to wet floors, uneven walking surfaces, and workspaces and walkways containing trip hazards. The team tracks and reviews all employee falls to determine further interventions needed to prevent harm to staff.



<sup>1</sup>Occupational Safety and Health Administration. (n.d.). Fall protection in general industry. Retrieved from [https://www.osha.gov/Publications/fall\\_protection\\_qc.html](https://www.osha.gov/Publications/fall_protection_qc.html)

# Laboratory and Pathology Safety Huddle

Every Monday through Friday at 11:30am, approximately 25 representatives from the division of Clinical Laboratory and Pathology meet at the departmental safety huddle board. During this time, each area representative shares the status of department operations.

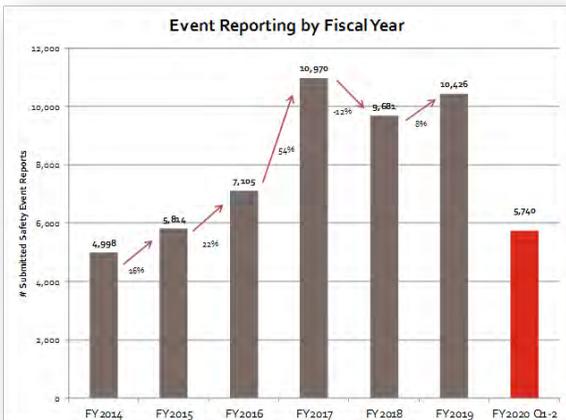
Concerns raised at the huddle vary from day-to-day but often include issues such as turnaround time of patient results, inventory shortages from our vendors, or employee safety events. Chosen metrics for each department are reported on select days, highlighting the progress of a few quality improvement projects that have been initiated in the division. This quick operational meeting conveys the most impactful and vital information to all those that are present and decreases the risk of miscommunication between units.

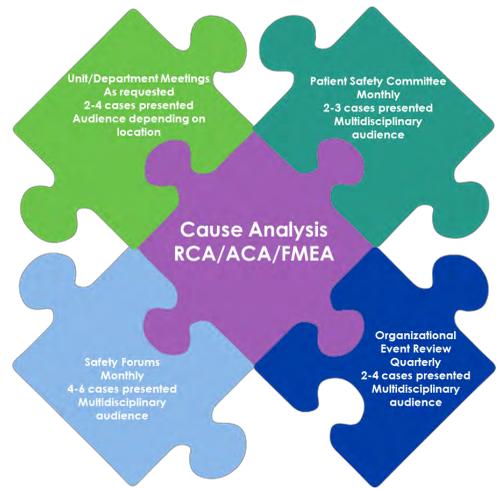


## Safety Event Reporting

Safety event reporting is an essential tool for high reliability and strengthening our safety culture at Children's National. Safety event reports lead to system-level improvements and shared learning across disciplines and departments. Our organization strives to reduce harm through sustaining safety event reporting and shifting our reporting paradigm to become increasingly proactive in order to address risks before they reach a patient. Since FY2017, there have been over 9,500 safety event reports submitted by staff each year. Our goal in FY20

is to get back to best and reach 11,000 safety event reports. To support this effort and culture of safety, the Patient Safety Team will be launching a multidisciplinary team focused on interventions, such as improving safety event reporting follow-up, safety event reporting system user experience, and great catch recognition, to achieve our goal of sustaining and increasing safety event reporting by staff.





## Spreading Apparent Cause Analysis Findings

Children’s National recognizes that safety events rarely happen in siloes. Risks are present across disciplines and departments; thus, we have fostered shared learning experiences within the organization which are key to strengthening our safety culture and driving our journey to high reliability. It is imperative that we share findings from safety event reports and cause analyses to ensure that leaders and staff across the organization have situational awareness of risks and actions taken to prevent further harm to patients, families, or staff. We defer to the expertise of our front-line staff to identify and report risks, and it is essential that we close the loop on how the organization is responding to improve safety.

Cause analysis findings and actions are shared with a multidisciplinary audience at the monthly Patient Safety Committee meetings and quarterly Organizational Event Review sessions. Key stakeholders present their colleagues with an overview of safety events, the identified gaps in processes and causes, and the resulting action plans. Importantly, the audience is encouraged to consider risks in their own areas of expertise and reflect on how the events discussed may be applicable to their own practice. Sharing cause analysis findings provides learning opportunities for those not directly involved in the safety event and promotes sensitivity to operations, informing all of risks and the action taken to prevent harm. By improving transparency, the Patient Safety team has created a culture where departments can learn from each other, and we can create a safe environment for our patients, families, and staff.



# Error Prevention Training Refresh

Safety culture transformation is a journey, and everyone has a role in continuous learning and improvement. Our goal is to eliminate serious safety events by empowering every individual in the organization to identify, report, and reduce risks. In 2019, we aimed to achieve this goal through organization-wide Error Prevention and Leadership Methods training. Everyone in the organization, regardless of role, was invited to participate in these valuable learning opportunities.

100% of Children's leaders attended Leadership Methods training, a two-hour training led by industry experts focused on creating high reliability organizations. The training provided techniques to reinforce high reliability principles and strengthen safety culture. Front-line staff received a refresher course in Error Prevention Techniques through an interactive online module that provided tools to prevent harm and information needed to recognize, report, and prevent safety events. This training provided skills and knowledge to strengthen our safety culture, utilize high reliability principles, and prevent harm to our patients, families, and staff.

People make between 10 to 12 errors per hour doing everyday tasks

- Peer Check
- Closed Loop Communication
- STAR
- ARCC

Work Environment	Person's Capabilities
Task at Hand	Human Nature

The circular diagram features various icons including a lightbulb, a globe, a medical cross, a heart with a pulse line, a magnifying glass, an hourglass, a computer monitor, a stethoscope, a first aid kit, a speech bubble, a bar chart, and a microscope.



## Emergency Business Continuity Plan

The Emergency Preparedness and the Project Management Office collaborated in the development of the Business Continuity Plan (BCP) in 2018. The plan proactively addresses challenges our hospital might face in the event of a catastrophic incident that results in significant loss or surge beyond our Emergency Operations Plan (EOP). The BCP will augment the existing EOP and addresses large scale threats through initiating activation, relocation, continuity of operations, and recovery. The first of three phases for this proactive planning was completed in October 2019. Ten departments developed local Business Impact Analysis and Business Continuity Plans for their critical functions. These plans were tested in a hospital-wide BCP tabletop exercise, with over 60 participants from 35 departments. This exercise prepared the hospital to provide essential services and maintain the following key functions: Facilities, Information Technology, Security, Supplies and Staffing. The second phase of the BCP began in January 2020 with 14 new departments.







## Driving Improvement

## Antimicrobial Stewardship Program

The Centers for Disease Control and Prevention (CDC) and Infectious Diseases Society of America (IDSA) recommend that all hospital Antimicrobial Stewardship Programs (ASP) perform broad interventions, such as prospective audits with feedback and/or prior authorization of certain antimicrobials. Our ASP utilizes both of these strategies for targeted antimicrobials.

**Prospective audit with feedback:** Treatment with intravenous vancomycin, an antibiotic used for resistant gram positive infections, is associated with acute kidney injury and requires therapeutic drug monitoring. Benchmarking data showed that in 2017, vancomycin use at Children's National Hospital was significantly higher than use at peer institutions, suggesting there was likely an opportunity to optimize use of this drug. Eleanor Sadler, Infectious Diseases Clinical Pharmacy Specialist and Co-Director of the Antimicrobial Stewardship Program, reviews all prescribed courses of vancomycin hospital-wide on a daily basis (Monday through Friday) to identify opportunities for recommendations addressing alternative therapy or discontinuation. The recommendation acceptance rate by medical teams is approximately 70%.

**Antibiotics requiring prior authorization:** Meropenem and ertapenem, members of the carbapenem class of antibiotics, are some of the last line options to treat infections caused by multi-drug resistant bacteria. Benchmarking data showed that our use of carbapenems was substantially higher as compared to peer institutions. After a few months of performing prospective audit with feedback, these agents were added to the list of antimicrobials requiring prior authorization to ensure appropriate and optimized use at all times. Approximately 15 requests are made each month with about a 75% approval rate by ASP.

### District of Columbia Hospital Association (DCHA) Awards Children's National NICU

On June 6, 2019, the DCHA awarded Children's National NICU a 2019 Patient Safety & Quality Award for decreasing vancomycin use. The NICU received \$5,000 to support their work to improve outcomes for our neonatal patients. This work has spread beyond the NICU to include the rest of the hospital as part of the Antimicrobial Stewardship program.



From Left: Dr. Kurt Newman, CEO, Carmen Blake, RN, NICU Educator, and Kathy Gorman, COO accepting DCHA award for NICU's work on improving appropriate vancomycin usage.



## Quality Improvement Leadership Training: QuILT

Successfully weaving continuous performance improvement into the fabric of workplace culture requires a workforce trained in quality improvement (QI) methodology. Since 2015, our Quality and Safety Department sponsored nearly 50 hospital staff members to attend the Quality Improvement Essentials (QIE) training course at Nationwide Children’s Hospital. QIE’s project-centered training approach aimed to apply improvement science methodology to everyday work.



In September 2019, Children’s National quality/safety leadership launched the Quality Improvement Leadership Training (QuILT) program to train internal clinical and administrative leaders in QI. The QuILT program uses didactic and project-based learning to provide a strong foundation in quality improvement principles and skills. QuILT consists of a series of half-day sessions led by QI-trained hospital faculty. At the completion of QuILT, participants are equipped to lead multidisciplinary teams through QI projects across the organization.

On December 3rd, 2019, participants presented their QI initiatives. Leadership Council members praised the participants for their strong projects and are excited about the increasing capacity for QI at Children’s National Hospital.

Name	Project
Dianna Abney	Improving Depression Screening in Adolescents at Cambridge Pediatrics
Andrew Dauber	Increasing Urine Microalbumin Screening Rates in Children with Diabetes
Nathan Dean	Improving Sleep Hygiene in Critically Ill Patients
Deborah LaViolette	Red Badge Project: Expediting Antibiotic Treatment to Febrile Neutropenic Patients in the ED
Janice Mason	A Caring Bundle Approach to Patient Falls Prevention
Jay Pershad	Reducing 48 hour ED Returns
Sophie Pestieau	Can we Decrease General Anesthesia Exposure in Infants?
Birte Wistinghausen	Increase Discharges Before Noon
Sarah Yuhas-Schiltz	Transplant Recipient Transition to Adult Care



## Driving Improvement

### Safety Culture Improvement Partners for Quality

Safety culture surveys provide valuable insights into staff perception of safety climate and overall organizational culture. Culture improvement requires patience and creativity, and survey results often receive attention at the macrosystem level with a broad improvement plan. The challenge for leaders is utilizing results to improve culture at the microsystem. Safety Culture Improvement Partners (SCIP), launched in the spring of 2019, aims to address these challenges by aligning patient safety and performance improvement methodologies and the expertise of Patient Safety staff with the knowledge that microsystem leaders and staff possess to guide meaningful safety culture improvement. The SCIP framework provides microsystem leaders with tools, support, project management, and expertise to structure culture improvement work.

Based on 2018 survey results, nine teams agreed to participate in SCIP. In June 2019, teams completed a pulse-check survey focused on Teamwork and Safety Climate to measure current perceptions in both domains and target areas for improvement. Teams chose projects that directly impact their unique needs with project aims defined to drive action and achieve results specific to their areas. Participating teams include clinical, non-clinical, specialty groups, and trainees. Through this process, Patient Safety and the SCIP teams are creating a roadmap for implementing safety culture improvement at the microsystem level and compiling internal best practice actions to spread throughout the organization. In mid-2020, SCIP teams will complete a second pulse-check survey to gauge effectiveness of interventions and determine next steps prior to the organization-wide safety culture survey in late 2020.

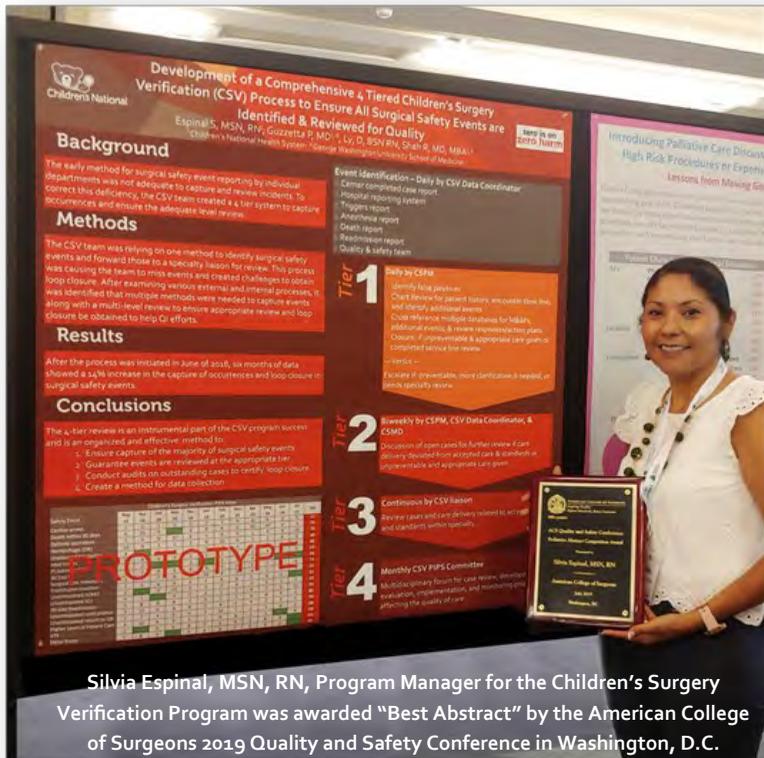
#### Project Examples

- Streamlining the insulin pump process
- Improving team communication tools
- Reducing stress in the workplace
- Closing the loop on safety event reports

# Surgery Verification

In July 2019, the American College of Surgeons (ACS) awarded our Surgery Verification Team “Best Pediatric Abstract” for their system improvements capturing patient surgical safety events. Children’s National is one of only 22 level 1 ACS-verified pediatric surgery centers in the US.

Our Children’s Surgery Verification Quality Improvement Program aims to improve care for surgical patients with the goal of providing the highest quality care and outcomes. Our team captures and reviews surgical safety events to improve processes before, during, and after a procedure. The team developed tiered Children’s Surgery Verification, a comprehensive way of streamlining the system to capture and address surgical safety events. The verification process enhances the hospital’s ability to identify surgical safety events, which then go through multi-level reviews from several disciplines. The work involves collaborating with different departments to review surgical cases flagged with a safety event, according to the metrics set by the American College of Surgeons. Data are collected, displayed in a real-time harm index dashboard, and monitored to determine opportunities for improvement.



Silvia Espinal, MSN, RN, Program Manager for the Children’s Surgery Verification Program was awarded “Best Abstract” by the American College of Surgeons 2019 Quality and Safety Conference in Washington, D.C.



## Celebrating Excellence



### US News & World Report

Children's National in Washington, D.C., was ranked No. 6 nationally in the U.S. News Best Children's Hospitals annual rankings for 2019-20. Its Neonatology program, which provides newborn intensive care, ranked No.1 among all children's hospitals for the third year in a row.

This is also the third year in a row that Children's National has been named a top 10 hospital in these national rankings. It is the ninth straight year it has ranked in all 10 specialty services, with five specialty service areas ranked among the top 10.

### Children's National Hospital Magnet® Recognition



Children's National Hospital is a Magnet designated hospital, a designation awarded to hospitals that demonstrate the highest standards of nursing and patient care delivery. Only seven percent of hospitals across the United States achieve Magnet status. Of those hospitals, an even smaller percentage are pediatric hospitals, placing Children's National among an elite group of healthcare facilities nationwide. On February 3, 2020 Children's National submitted the Magnet document for our third Magnet designation.

"This next designation will serve as a significant milestone in the ongoing evolution of the professional practice of nursing at Children's National. Our Magnet submission document highlights nursing excellence at all levels, and across many settings. I am so inspired by the work that is done each and every day." Linda Talley, MS, BSN, RN, NE-BC, FAAN, Vice President and Chief Nursing Officer.

"I'm so proud of all of the nurses at Children's National. Their hard work and dedication to their profession and to children is shown in the extraordinary care they provide every day." Kurt Newman, MD, President and CEO.



In 2019, Children's National Hospital received the Health and Human Services (HHS) 2019 Workplace Partnership for Life: Platinum Award and the Washington Regional Transplant Community (WRTC) Gold Medal of Honor for its accomplishments in supporting and promoting organ donation. Additionally, Children's National Pediatric Intensive Care Unit (PICU) Interprofessional team members received "Donation Champion" and "Best Practice-Huddles" Awards by WRTC.



## Organ Donation Council

The Organ Donation Council is a multidisciplinary group tasked with improving Children's National culture of donation through education and process improvement. To honor a donor or organ recipient, the Organ Donation Council raises a "Donate Life" flag in front of the hospital. In 2019, the flag was raised numerous times for kidney and heart transplant recipients. Additionally, the flag was raised five times for donor families.

Children's National and WRTC began approaching families as a joint team to collectively accomplish goals, and 32 Children's National employees were trained during Pediatric Donor Resource training in March 2019. Many advances and developments are expected from the Organ Donation Council in 2020.





## Celebrating Excellence

### Quality Week

Chartered Quality Institute (CQI), the chartered body for quality management professionals, dates back to the First World War. Forming in London with a mere 500 members, the institute was created to ensure factory procedures were performed correctly. After a period of exponential growth and global expansion, the institute celebrated the first World Quality Day on November 11th, 1988, to promote the awareness of quality around the world, as well as encourage improvement and prosperity for organizations through the implementation of strong quality standards. Today, there are more than 4,700 Chartered Quality Professionals advocating for a world in which all organizations optimize value for their stakeholders through excellence in governance, assurance, and improvement.

Quality Week was started by the National Association for Healthcare Quality to increase awareness of healthcare quality programs and to highlight the work and influence of healthcare quality professionals on improved patient care outcomes. Children's National Hospital celebrates Quality Week to highlight the quality improvement initiatives led by staff members throughout our organization.

The Performance Improvement Department hosted the 2019 Quality Week from September 30 – October 4. The events included a special Grand Rounds with a multidisciplinary panel focused on clinical QI initiatives as a showcase event. This event highlighted QI projects with posters and handouts on display. The showcase offered an opportunity for staff to share and learn about an array of improvement projects at Children's National.



# Quality Week Grand Rounds

The Quality Week Grand Rounds, "QI On The Fly", featured a panel of rapid-fire QI panel presentations. Dynamic speakers from multidisciplinary teams spoke about key aspects of the quality improvement journey. They focused on the importance of their projects by highlighting their burning platform: a succinct reasoning on why their projects were solving crucial problems. Panelists highlighted powerful drivers of strategic change to improve problems. Panelists also focused on their outcomes and strategies for continued sustainment and spread.



## STAT Med Turn Around Time



Eric Manuel Balmir, MS, PharmD, CIM  
Chief, Division of Pharmacy Services

## Late Rescue Collaborative



Nathan Dean, MD  
Attending, Critical Care Medicine  
Medical Unit Director for Pediatric  
Intensive Care Unit



Rose Szeles, MS, RN, NE-BC  
Director of Nursing  
Center for Cancer and Blood Disorders

## Lap Appy SSI Work



Jessica Cronin, MD  
Attending Anesthesiology  
Assistant Professor

## Increasing Family Activated RRTs



Jacqueline Newton, RN, MSN, CPEN, NE-BC  
Director of Medical Nursing

## Improving Pediatric Sepsis Outcomes



Matt Sharron, MD  
Attending, Critical Care Medicine  
Assistant Professor



Rose Szeles, MS, RN, NE-BC  
Director of Nursing  
Center for Cancer and Blood Disorders

## Reducing NICU Vancomycin Use



Rana Hamdy, MD, MPH, MSCE  
Division of Infectious Diseases  
Director, Antimicrobial Stewardship Program

# About Children's National Hospital

Children's National Hospital, based in Washington, DC, has been serving the nation's children since 1870. We have created an environment in which care, education, and research work together seamlessly, simultaneously, and synergistically. Recognized for our expertise and innovation in pediatric care, Children's National serves as a strong voice for children through advocacy at the local, regional, and national levels.

**15,000 inpatient visits; 17,000 surgical procedures;  
455,000 outpatient visits**

**323 bed acute care hospital with 66 bassinet Level IV  
Neonatal Care Unit**

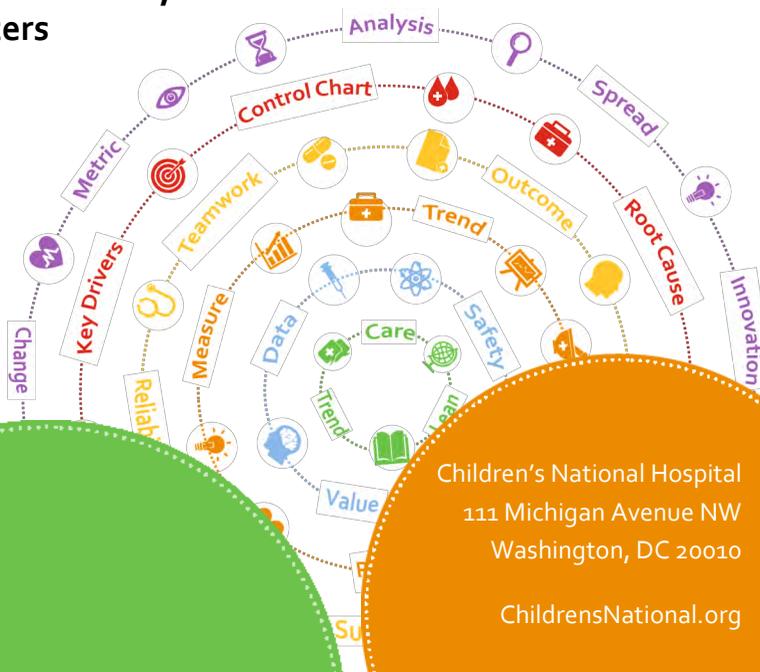
**Two pediatric emergency departments, critical care transport  
program**

**Community-based primary care network,  
seven regional outpatient centers**

**Ambulatory surgery center**



Children's National



Children's National Hospital  
111 Michigan Avenue NW  
Washington, DC 20010

ChildrensNational.org