A NATIONWIDE CHILDREN'S HOSPITAL PUBLICATION | VOLUME 30 ISSUE 2 | SPRING 2015

Everything Matters In

Patient Care

Innovative Problem Solving for Common Challenges

The mock MRI scanner reduces patient anxiety and teaches children to complete their MRI without sedation.

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Pictured left: Child Life Specialist Amy LeRoy coaches a child in the mock MRI scanner.

Innovation and Creativity Matter

Linda Stoverock DNP, RN, NEA-BC,
Senior Vice President, Patient Care Services, Chief Nursing Officer

Nationwide Children's holds innovation as one of its core values. Innovation is a way creative solutions are applied to problems or group of ideas that are not the norm or highly recognized in many disciplines. Yet, innovation and creativity are silent arts that have existed in nursing since the birth of the profession. Florence Nightingale improved poor public health conditions with new ways of thinking. Clara Barton once said, "I have an almost complete disregard of precedent, and a faith in the possibility of something better… I defy the tyranny of precedent. I go for anything new that might improve the past." It is imperative in our Journey to Best Outcomes that we continue to be pioneers in our field looking for new solutions to the unique problems our individual patients or groups of patients present to us.

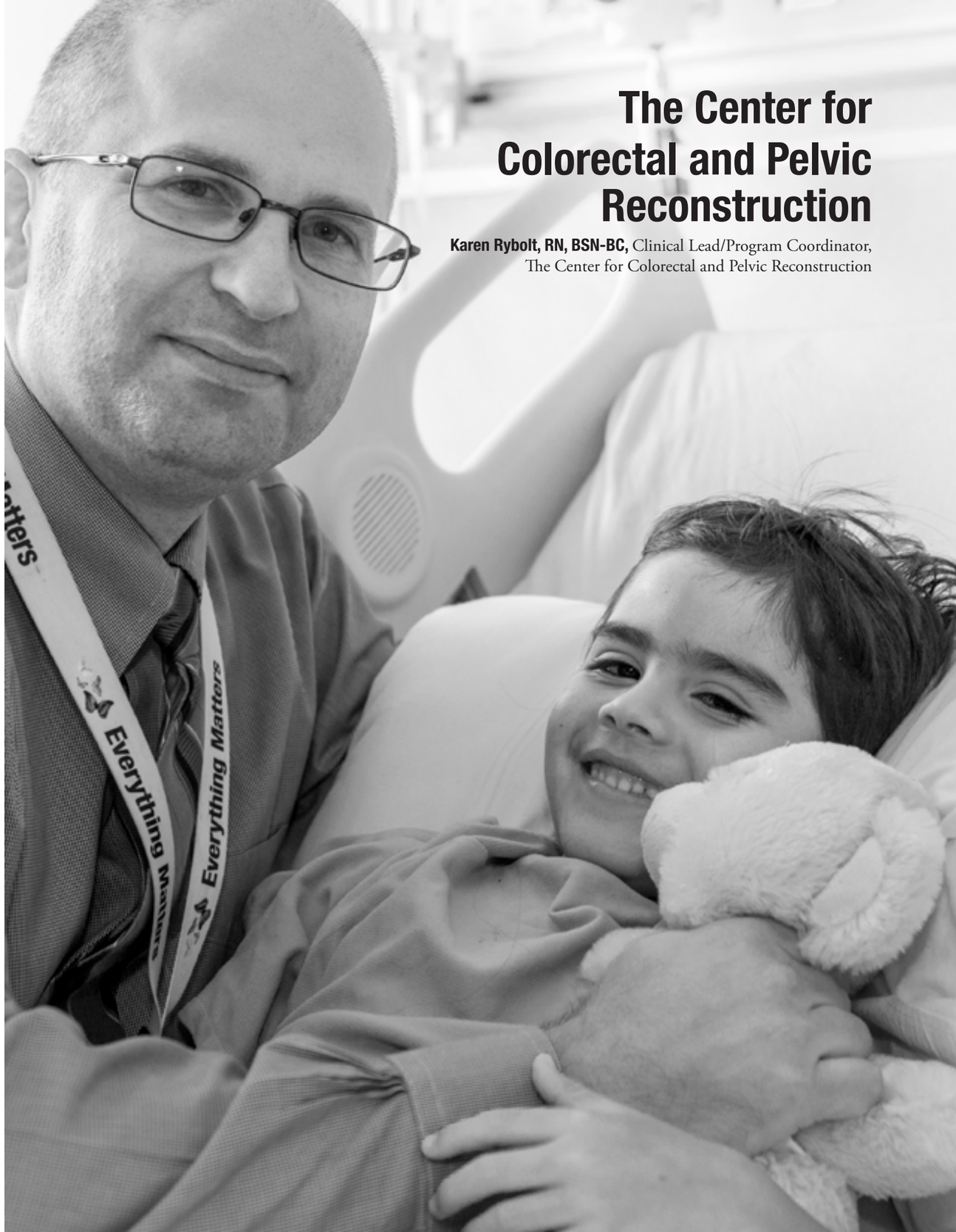
"I have an almost complete disregard of precedent, and a faith in the possibility of something better… I defy the tyranny of precedent. I go for anything new that might improve the past."
Clara Barton

Often we are inundated with technology, standardization, and tools for nurses to provide the best possible care to their patients, and this overshadows the basic acts of nursing care that define creative ways to provide nursing care. Nurses find creative ways to bring the very essence back to the bedside.

In order to live our values and continue to build a culture that embodies innovation and creativity, staff must be encouraged to speak up, rewarded for trying new ideas and provided opportunity to participate in solution generating conversations. Leaders can encourage staff ideas through praise and recognition for the contribution to new ideas. Staff on the frontline know what works best and what doesn't work for their patients. Creative nurses are nurses who have the capacity to ask new questions, seek new answers, create new standards, and see what others see, but in a different way. Creativity exists in all of us, but requires time, energy, support, discipline and recognition to flourish.

Nursing creativity flourishes in environments where nurses and nurse leaders share similar values, trusting relationships are abundant, risk taking and exchange of ideas is encouraged, and nurses have autonomy to work freely and independently. All disciplines are needed to work together on the common needs of the patient with each discipline understanding the unique roles they play and transparent communication including the patient family. This is the environment recognized by the American Nurses Credentialing Center (ANCC) Magnet accreditation.

As you read through this issue of Everything Matters In Patient Care, I hope you will be inspired by the new solutions to old problems your colleagues have developed to improve patient outcomes. There is no shortage of healthcare problems to be fixed, only a shortage of willingness to think creatively and work on new solutions.



The Center for Colorectal and Pelvic Reconstruction

Karen Rybolt, RN, BSN-BC, Clinical Lead/Program Coordinator, The Center for Colorectal and Pelvic Reconstruction

CCPR has had over

500

REFERRALS

& has performed over

300

PROCEDURES

since April 2014.

The Center for Colorectal and Pelvic Reconstruction (CCPR) is a new program at Nationwide Children's Hospital which provides fully integrated pediatric care for children with all types of colorectal and pelvic reconstruction issues. The Center offers convenient access to colorectal surgery, gastroenterology/motility, urologic and gynecologic experts, and delivers a level of coordination and resources that have not been offered before in the management of pediatric colorectal problems anywhere in the world. The complex, inter-related problems associated with colorectal and pelvic conditions are best evaluated and treated by a team working together to establish an individualized care plan for every patient, at every stage of development, which results in the best outcomes.

Since opening its doors to patients in April 2014, the Center has had more than 500 referrals and has already performed more than 300 procedures. Patients have come to the Center from 41 states and 23 countries. The CCPR is led by Surgical Director Marc Levitt, MD, an internationally renowned pediatric colorectal surgeon, and Medical Director Carlo Di Lorenzo, Chief of the Department of Gastroenterology, Hepatology and Nutrition and internationally recognized expert in intestinal motility. The unification of surgical and medical expertise in this area is unparalleled anywhere in the world, as is the creation of integrated surgical care for complex pelvic reconstruction needs for pediatric surgery, urology and gynecology, which allows for a unique comprehensive planning approach.

Patients have come from 41 states and 23 countries.

Dr. Levitt, an expert in providing care to children with complex gastrointestinal anomalies including cloacal anomalies, was recruited to Nationwide Children's in April 2014. He has published more than 120 manuscripts and 60 book chapters, and has delivered over 300

Marc Levitt, MD, CCPR Surgical Director, and Carlo Di Lorenzo, CCPR Medical Director and Chief of the Department of Gastroenterology, Hepatology and Nutrition

national and international and local/regional presentations of his work. He has been invited as a visiting professor in over 30 countries. Dr. Levitt has directed multiple training courses attended by established surgeons and surgical trainees internationally. He dedicates much of his free time to mission trips around the world where he trains surgeons in his complex surgical techniques.

The cross-functional CCPR team treats all types of colorectal and pelvic conditions. These conditions include anorectal malformations including imperforate anus, Hirschprungs disease, fecal incontinence, inflammatory bowel disease, familial polyposis, idiopathic constipation (encoparesis), motility disorders, pelvic reconstructive problems, congenital gynecologic anomalies, complex urologic problems and disorders of sexual development. The services provided include colostomy creation, closure and revisions, sacral nerve stimulation, pull through procedure for anorectal malformation (PSARP), laparoscopy, pull through procedure for Hirschprung disease, urologic reconstruction, bowel management for fecal incontinence, vaginal replacements, appendicostomy (Malone procedure), cecostomy, and anorectal and colonic manometry testing.

Meet Kaylee

Four year old Kaylee travelled to Nationwide Children's from her home in Nevada. She was born with a complex condition called cloaca which is a malformation in females where the gastrointestinal, reproductive and urinary tract are fused together creating a common channel. In normal anatomy, these openings are separate. Kaylee had undergone six surgeries in Nevada to separate these tracts and none were successful. Mom pursued her search for an expert second opinion which led her to Dr. Marc Levitt, surgical director for the CCPR Center at Nationwide Children's. Dr. Levitt consulted with V. Rama Jayanthi, Chief of Urology at Nationwide Children's and together they repeated Kaylee's surgery with excellent results. She can now do all things that a typical four year old can do and there are no plans for additional surgery. Kaylee will need lifelong urological, gynecological and colorectal care which will be coordinated through the CCPR which integrates all the specialties she will need.

"Nationwide Children's is knocking down the traditional walls of care for children with complex GI, colorectal or pelvic reconstruction needs. These patients benefit more from a close collaboration of medical and surgical specialists and I am excited to join forces with some of the country's most talented specialists in the fields of GI, Urology, Pediatric Surgery and Gynecology at Nationwide Children's. Combining all this together is what the future of pediatric medicine will look like and we anticipate that patients everywhere will benefit."

–Marc Levitt, MD

Levi and the Spirit of Perseverance:
A Parent's Perspective

Meredith Ames Warren, Parent

Dr. Marc Levitt is a one-of-a kind surgeon who has transformed my family's life by procuring us quality of life and a renewed hope through a surgical procedure known as a "continent appendicostomy." My son Levi used it for the first time on November 7, 2014, at the Ronald McDonald House in Columbus, Ohio. We were so elated by the results that we found ourselves dancing and singing around the room as bouts of euphoria spontaneously erupted. Years of pain, frustration, sadness and repressed memories of futile treatments extemporaneously vanished.

Levi's condition called anorectal malformation (ARM) is still wildly misunderstood worldwide. While he had surgeries to repair his malformed anatomy, the surgeries proved mediocre in functionality and left us silently suffering for five years on a daily basis from the effects of fecal incontinence and poor management of his chronic pain. Dr. Levitt, together with an amazing team of other doctors, nurse practitioners, nurses, social workers and many others at Nationwide Children's Hospital, is on the brink of a new frontier. Patients are coming in droves and just under half of them are to be "fixed" from previous surgeries, also called "re-do's." This birth defect is becoming more common, but so far no one can explain why. I am disheartened when I think of mothers having to hear the same news I did on July 10, 2009, in a private hospital in Madrid, Spain, "Este niño no tiene salida" which translates to "This child has no exit."

I am also disheartened by the lack of understanding of the general public about the implications of fecal incontinence and the chaos and despondency it can cause the entire family.

In a journal entry about eight nights into the eleven-day hospital stay, I wrote:

"I find myself alone in a dimly lit hospital room, with just my thoughts while Levi sleeps. I am nostalgic for our friends who are all out this Saturday night, watching the game. In a simple moment, I realize that the world goes on, despite illness, despite my son's surgery, despite the fact that our life is so hard. I don't want to be anywhere else, as I want my baby to get the help he deserves. But, I do want this feeling of isolation and despair to go away."

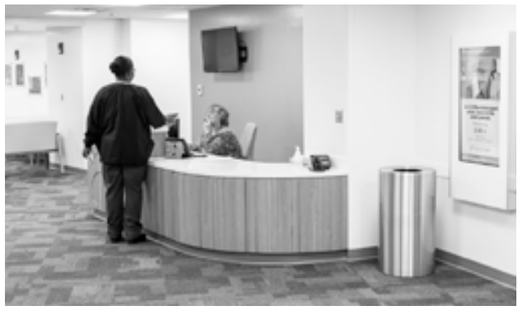
After I wrote that entry, I contemplated some of Dr. Levitt's words from the previous days "Well, we've just got to wait for the grass to grow" and "The ultimate goal is to be clean." Only someone who really understands what life is like "unclean" can realize the prodigiousness of this goal.

Yesterday, the doctor pretended to eat Levi's nasty Halloween fingernails while holding him in his lap for a picture. The day before, he grabbed Levi's cheeks and told him he stole his dimples. Dr. Levitt understands how to circumvent humility by buttering up his patients with good old-fashioned humor and compassion.

"I contemplated some of Dr. Levitt's words from the previous days "Well, we've just got to wait for the grass to grow" and "The ultimate goal is to be clean." Only someone who really understands what life is like "unclean" can realize the prodigiousness of this goal."

Protecting Employees While Preparing for Ebola

Dennis Cunningham, MD, Medical Director, Epidemiology



Nationwide Children's Hospital began preparing and planning in July 2014 for the possibility of seeing a patient with suspected or confirmed Ebola. Many employees from different specialties make up a core planning group which includes nurses, physicians, educators, and infection control practitioners.

Of the various aspects of care discussed within the planning group, incredible attention and detail goes into safety planning. While safety for the patients and families is always a top priority, safety considerations for staff are equally important. Thorough planning, regular drilling combined with continuing education and support of a questioning atmosphere are the key components of successful preparation.

Here are three particular areas of concern where special attention has been given to protect patients, families and staff from exposure to Ebola.

At Registration

Signs are posted in registration areas and screening questions are asked of all patients. Any patient with a positive screen for Travel/Exposure and Ebola symptoms must be placed in a personal protective equipment (PPE) mask, along with their family. The patient and family are then placed in a private room or isolated away from others as possible. If a negative pressure room is available that is the first choice; however, Ebola is not airborne, so negative pressure is not required. Staff are to immediately contact the manager or Nationwide Children's operator and ask for the nursing supervisor. A special team would help get the patient transferred and guide staff on next steps.

Soap and water or hand gel are the best line of defense after contact with someone who may be positive. These steps will ensure the safety of the staff registering patients as well as the other patients and families in the area.

During Inpatient Stay

A Risk Assessment Team that receives specialized training are the primary caregivers. This group of expert staff are the only staff members caring for a patient with Ebola. PPE recommendations from the Centers for Disease Control are a regular mask, gown, double gloves and face shield. Until there are uncontrolled body fluids there is VERY low risk of transmission and this PPE is appropriate. Spotters (buddy system) would be used to ensure PPE is removed appropriately to eliminate exposure to care givers. Ebola responds to the hospital's normal cleaning agents, so all equipment is cleaned per usual policies.

Traveling Staff

Some caregivers feel compelled to participate in medical mission trips to counties with Ebola so it is essential to ensure the safety of other staff upon return of staff who have been in the affected areas. Staff who plan to travel to the countries identified as at risk should alert Employee Health before they depart. The following outlines the process Employee Health will follow to approve return to work.

3 Steps Needed Before Returning to Work:

1. Once back in Ohio, call Employee Heath to schedule an appointment, which must take place before you return to work.
2. Employee Health will present the case to the Medical Director of Epidemiology, based on reason for travel and determine if monitoring or restrictions are needed.
3. One of three outcomes:
   - If self-monitoring is required, this must be followed 100%.
   - If no monitoring or restrictions are needed, manager will be notified of approval to return to work.
   - If work restrictions are needed, manager will be notified and staff will receive further instructions.

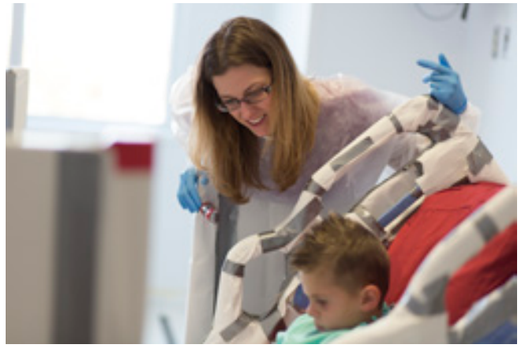
While Ebola is very deadly, transmission is well understood. With proper planning, we can dramatically decrease the risk to our patients, families and staff. Preparation is the key and we are ready. At Nationwide Children's, our advantage is we have good infection control practices and supplies are ready if there is a suspected case.

I-131-MIBG: An Innovative Therapy

Megan Isley, DNP, RN, CPHON, Program Manager, Hematology/Oncology/Blood & Marrow Transplant

The Journey to Best Outcomes requires more than hiring the best faculty and providing state-of-the-art facilities. It also requires the ability to offer innovative therapies targeted at improving the quality of life for our patients. The Division of Hematology/Oncology/Blood & Marrow Transplant is striving to do that and more. Evolving into a premier program requires the integration of solid research, clinical expertise and innovative therapies. One such therapy recently implemented at Nationwide Children's Hospital is MIBG, or meta-iodobenzylguanidine therapy. I-131-MIBG is a radiopharmaceutical administered by intravenous infusion which targets and kills tumor cells in children with specific cancers such as neuroblastoma. Unlike traditional radiation therapy which only treats a limited area, I-131-MIBG therapy has the ability to travel throughout the body to target and kill only tumor cells. This allows the therapy to target multiple different tumor sites while sparing healthy tissue. Following the infusion, the radioactive material is taken up from the bloodstream into tumor cells and decays slowly over the following days. Due to the nature of the treatment, children are hospitalized for approximately three to five days following the infusion for radiation precautions and monitoring.

Children undergoing I-131-MIBG therapy at Nationwide Children's are treated in a unique room that meets specific safety standards to ensure the best care for the patient and their family. The suite is the size of 2 hospital rooms and includes a separate family room with a TV and sleeping area. As integral members of the patient's care team, families are asked to participate in the daily care of the patient receiving treatment. Additionally, the adjoining patient room is fitted with a TV, DVD player and gaming system. Tablets with video conferencing capability are provided to ensure the patient and family can communicate seamlessly during their admission. The room is also equipped with day and night time video monitoring capabilities to ensure optimal patient safety and communication. To protect families and staff from radiation exposure, precautions



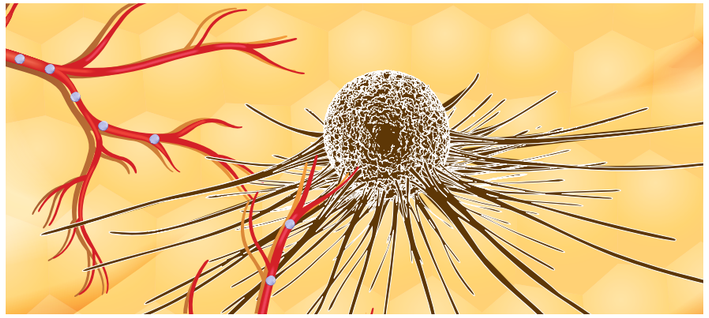
are followed for radiation protection. The patient room is lead-lined, and moveable lead shields encircle the patient to ensure staff and family radiation exposure is limited. Families and staff are asked to wear disposable gowns, gloves and shoe covers to prevent the chance of radiation contamination. Dosimeters are worn by families and staff so that their radiation exposure can be evaluated.

The I-131-MIBG team at Nationwide Children's is an integrative team consisting of professionals with a wide variety of expertise. Overseen by Mark Ranalli, MD, the team consists of oncologists, intensivists, radiologists, physicists, nuclear medicine technologists, radiation safety professionals, psychosocial specialists, nurses and researchers who have all received specialized training for I-131-MIBG.

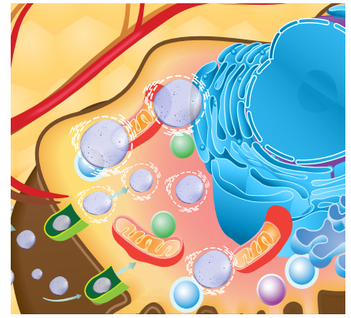
Nationwide Children's is proud to be one of the few pediatric centers to offer MIBG therapy, and continues to pursue innovative treatments and studies to ensure best outcomes for our patients in central Ohio and beyond.

More information on the MIBG treatment process including an animated tour of the room and a photo gallery can be viewed at **NationwideChildrens.org/MIBG-Room.**

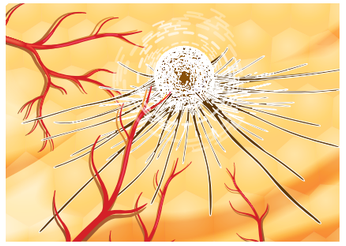
I-131-MIBG Treatment

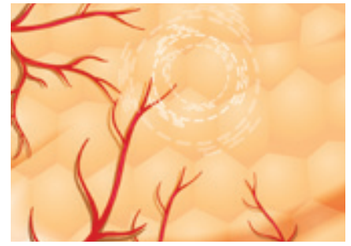


1. The high dose radioactive form of MIBG is infused into the patient through an IV. The radioactive MIBG travels through the blood stream to the cancer cells. MIBG is not absorbed or used by other cells in the body.



2. Once inside the cancer cells, the treatment gives off particles of radiation that travel outward in all directions.





3. This radiation destroys the cancer cells.

Pharmacy Barcoding Provides Safe Dose Preparation

Jim Jones, RPh, MHA, Pharmacy Manager of Support Services
Scott Patton, RPh, IS Pharmacist

The pharmacy department is embarking on a new barcoding system to help pharmacy technicians select correct oral liquid medications for patient dose preparation. The system is a module in Epic called Dispense Prep. Barcoding technology has been in existence for many years and has started to be adopted in health care settings with increased frequency. Most people are familiar with the barcode medication administration process where a nurse scans a barcoded medication to ensure it is the correct medication before administering to a patient. This same type of safety technology is employed when using Dispense Prep.

Preparing to implement Dispense Prep is similar to the preparation needed to implement barcode medication administration. The barcodes on over 3,000 medications used in the pharmacy had to be checked. This is an important step since every part in the safety process is dependent on having a correct barcode that is recognized by Epic. Any medication without a barcode is labeled by the pharmacy barcode technician. The oral liquid dose preparation workflow was also evaluated and determined that implementing Dispense Prep would not significantly add time to the oral liquid dose preparation process.

Changes were made to the Epic software for this project, including the implementation of the new Dispense Prep module. The barcode currently on oral liquid syringe doses was changed to include dispense information to allow linking of medication administration to the preparation of the oral liquid dose. Internal labels for custom compounds prepared by pharmacy were also updated to allow linking back to the ingredients used (NDC, lot number, expiration date) to prepare that compound.

To use Dispense Prep, each patient's dose enters an electronic queue within Epic where the pharmacy technician manually selects the order (or orders) to print label(s) for compounding. To prepare a dose, a technician scans the order label barcode and then the barcode on the medication bulk bottle used to formulate the dose. Epic validates the scanned barcode, matches the order, and alerts the technician if anything does not match. If the barcode does not match, this would be an indication the technician selected the wrong medication or concentration. If there are no warnings, all is correct and the technician can proceed to prepare the oral dose which will ultimately be checked by a licensed pharmacist.

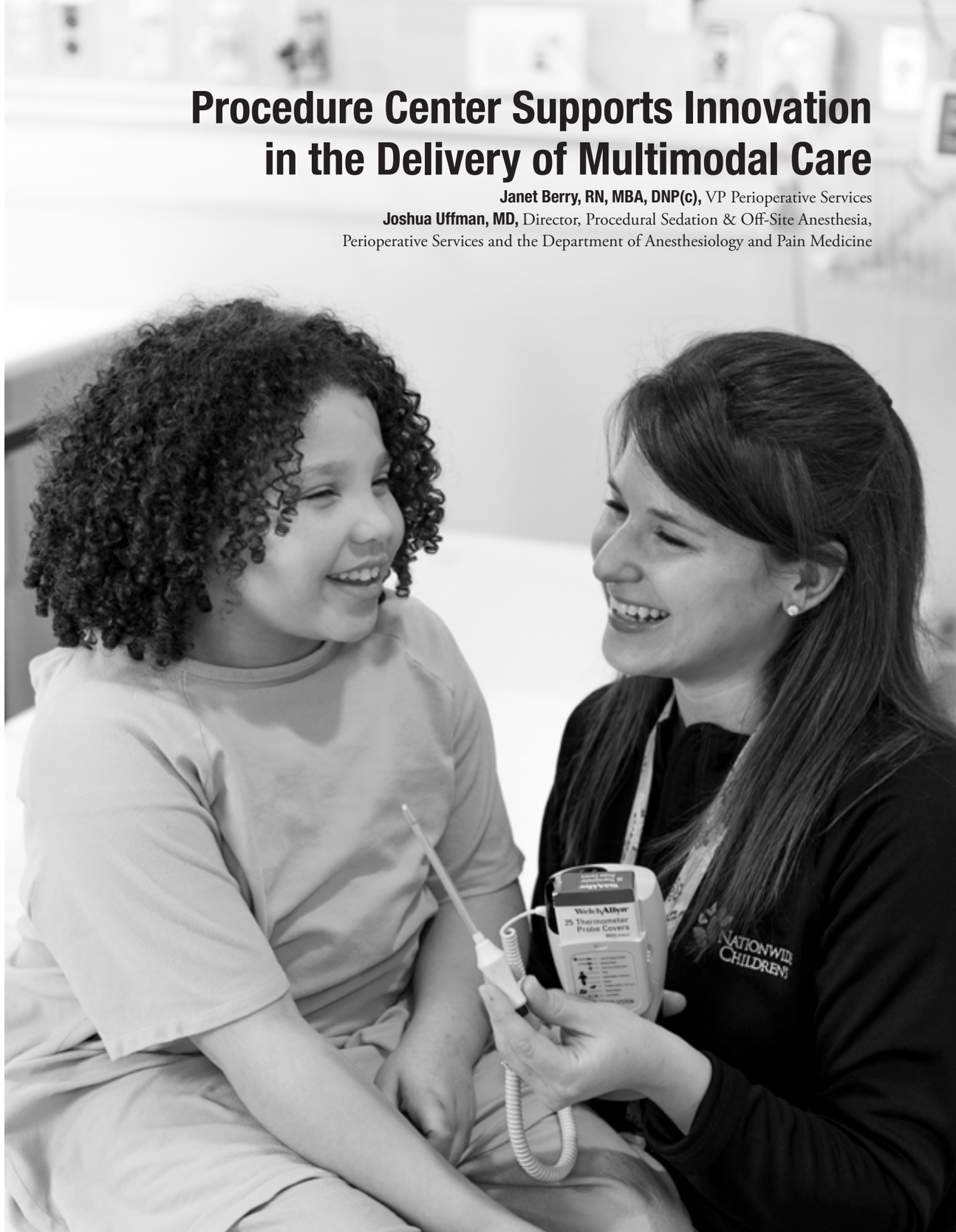
Using Dispense Prep:

1. The pharmacy technician manually selects the order to print labels for compounding from the electronic queue in Epic.
2. A technician scans the order label barcode and then the medication bulk bottle barcode to formulate the dose.
3. Epic validates the scanned barcode and matches the order.
   - If the barcode does not match, the technician selected the wrong medication or concentration
   - If there are no warnings, all is correct and the technician can prepare the oral dose
4. The oral dose will then be checked by a licensed pharmacist.

The new Dispense Prep barcoding system provides many patient safety benefits related to the medication dispensing process. Primarily it ensures that pharmacy technicians select the correct medication and concentration for dose preparation. It should also help eliminate waste since Epic will automatically discontinue orders from the electronic queue as they are discontinued or if the patient is discharged. By adding this new safety process, the pharmacy will be better positioned to stop medication errors from leaving the pharmacy and will help to continue to strengthen our Zero Hero goals.

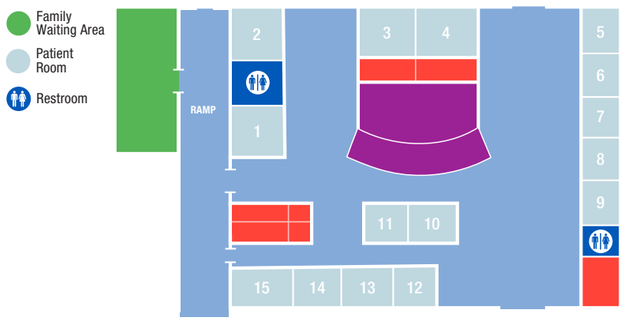
Procedure Center Supports Innovation in the Delivery of Multimodal Care

Janet Berry, RN, MBA, DNP(c), VP Perioperative Services
Joshua Uffman, MD, Director, Procedural Sedation & Off-Site Anesthesia, Perioperative Services and the Department of Anesthesiology and Pain Medicine



One of two procedure rooms in the Procedure Center

Nationwide Children's Hospital reached another milestone on its Journey to Best Outcomes when the Procedure Center opened on January 12, 2015. The vision of the Procedure Center is to deliver the best, integrated and transformative care for children requiring sedation and anesthesia for diagnostic and interventional radiological and minor, minimally invasive procedures. Located behind the Crossroads registration in the C Lobby, the Center is adjacent to the MRI and Interventional Radiology (IR) suites. The proximity to most radiological services allows the benefit of streamlined care in one central location for children requiring sedation or anesthesia for their diagnostic or interventional radiology procedure(s).



Diagnostic and interventional radiological procedures and other minimally invasive tests play a large role in providing complex care to our patients. Unlike adults with similar needs, pediatric patients are less able to perform these tests without anesthesia or sedation. Over time, as sedation and anesthesia became safer, demand for these services increased, often outpacing capacity. As such, Nationwide Children's providers responded to the best of their ability, but the result was a system that looked more like a patchwork quilt than a streamlined process. For example, prior to opening the Procedure Center, patients needing sedation for minor procedures could follow several pathways, depending on the availability of a given care team and their sedation/anesthesia needs. They might have the sedation provided by an anesthesiologist in the operating room, a pediatric intensive care physician in an inpatient unit procedure room, or a physician at the clinic location. For patients that needed a series of treatments over time, their experience could vary from treatment to treatment, depending on the care team and type of sedation/anesthesia available or requested. Additionally, if the patient required anesthesia for a radiological or interventional procedure, they would receive their pre-procedure and post-procedure care in the Perioperative Services departments on the second floor of the hospital, traveling to and from Radiology on the first floor for the actual procedure itself. The transport of an anesthetized patient from Radiology to the recovery room post-procedure involved public hallways and an elevator ride, and while we never had an adverse patient event during this transport, the route added to the complexity of care and potential for adversity.

In contrast, the new model of care in the Procedure Center supports the sedation, anesthesia, procedure and radiological needs of the patient, in one location, within contiguous space. The concept and patient flow mimics that of a Perioperative Services environment (Main Operating Room, or one of the Nationwide Children's Surgery Centers) with space designed to efficiently and safely care for the patient and family throughout the anesthetic and procedural event. Multiple registration desks and kiosks, a large family friendly waiting area, fifteen pre and post-procedure rooms, and eight recovery beds make this possible. The concept and planning for a Procedure Center began several years ago and included discussion with the Nationwide Children's Family Advisory Council. At that time, family suggestions included a centralized intake area for radiologic and minor procedures to make it easier for families to identify and find their destination, consistently staffed check-in desks, no food or drink in waiting areas when the children are restricted from having food and drink, and space for the families to store items, such as wheelchairs, during the procedures. The Procedure Center accommodates every request made by our families.

Another highlight of the Procedure Center is the two procedure rooms available for minor treatments and procedures including, but not limited to, wound and burn dressing changes, lumbar punctures (LPs), somatosensory evoked potentials (SSEPs), auditory brainstem response tests (ABRs), echocardiography, and joint aspirations or injections. The procedure rooms are equipped with DVD players for distraction and are designed to meet operating room specifications.

On a daily basis, Perioperative Services at Nationwide Children's cares for patients requiring more than one procedure while they are sedated, such as an LP and MRI. Historically, this presented a challenge in terms of where to do these minor procedures and how to coordinate them in one anesthetic event. The proximity of the procedure rooms to main radiology MRI will better support this care need by bringing the patient to the adjacent procedure room for the non-radiology procedure following the radiological procedure. This space and layout better equips the Perioperative Services team to coordinate the patient care needs while also allowing the radiology team to proceed with their busy schedule.

THE PROCEDURE CENTER:

MULTIPLE REGISTRATION DESKS AND KIOSKS

A LARGE FAMILY FRIENDLY WAITING AREA

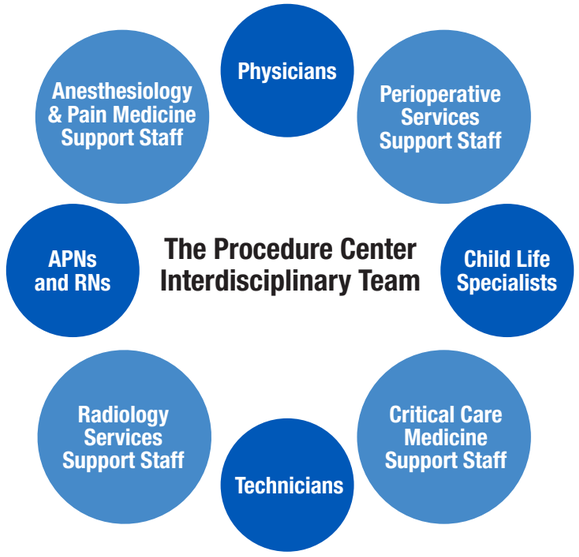
15
PRE AND POST-PROCEDURE ROOMS

8
RECOVERY BEDS

2
PROCEDURE ROOMS

The Procedure Center accommodates every request made by our families.

Perhaps the most unique feature of the Procedure Center is the interdisciplinary and interdepartmental team assembled from many disciplines and departments. Team members include physicians, advanced practice nurses, registered nurses, technicians, child life specialists, and support staff from the Department of Anesthesiology and Pain Medicine, Perioperative Services, Radiology Services and Critical Care Medicine (PASS team, Pediatric Analgesic Sedation Service). This integrated blend of professionals from multiple departments working simultaneously and synergistically in the care of the patients, creates a patient-centered, standardized, and consistent approach to our procedural and radiological patient care.



All patients scheduled for elective procedures in the Procedure Center will have a screening review done by the Perioperative Pre-Admission (PAT) nursing staff to identify existing health issues and needs. Information from the PAT screening review is shared with the anesthesiologists and critical care physicians and used to develop a preliminary anesthesia/ sedation plan, thus maximizing safety and quality and minimizing avoidable cancellations because of a pre-existing condition that isn't optimally treated. As part of this process, we are able to triage care for procedure room cases to the most appropriate provider type. Patients or cases in the procedure rooms that may require general anesthesia and all diagnostic and interventional radiologic procedures are cared for by an anesthesiologist. For these patients, the actual anesthesia plan (sedation versus general anesthesia) is determined at the time of service after consultation with the child and their family. As a result, an additional benefit to ordering physicians is that they no longer need to choose, or guess, the type of sedation/anesthesia their patients will need.

For patients scheduled for MRI that may not need sedation to complete the study, child life specialists are able to work with the child and family to evaluate their needs. In this process, they use an MRI simulator that looks, feels and sounds like the real MRI to give the patient and family an idea of what it would be like without sedation. For patients that do well in the simulator, they try the exam while watching a movie or listening to music. Once in the MRI, if they are not actually able to hold still for the study, the anesthesia team provides care as they had planned and discussed. This process avoids unnecessary anesthesia exposure yet ensures services for those that need it in a single visit. Patients known to be able to perform the radiologic procedure without sedation or anesthesia, bypass the PAT screening review and involvement of the anesthesiology provider, going directly to the appropriate Radiology modality area for their care.

The Procedure Center

The Procedure Center is **open daily Monday through Friday**, with scheduled procedures occurring between **7:30 a.m. and 5 p.m.**

The Center is managed by the current Main OR Perioperative management team, including Lisa Carney, RN, Manager Surgery Unit and PAT, Leigh Spears, RN, Manager Main Operating Rooms, and Renee Wolfe, Manager Post-Anesthesia Care Unit (PACU).

To schedule a procedure in the Procedure Center, please contact the Perioperative OR Schedulers at (614) 722-4125. For more information about the Procedure Center, please contact Josh Uffman, MD, Director, Procedural Sedation & Off-Site Anesthesia at Joshua.Uffman@NationwideChildrens.org or Janet Berry, RN, VP Perioperative Services at Janet.Berry@NationwideChildrens.org.

MRI Safety Update for Employees: The Magnet is Always On!

Jodi Mascolino, RN, BSN, CPN, Risk Manager, Department of Legal Services
Angela Montgomery, RT (R) (MRI), MRI Radiology Department

Magnetic Resonance Imaging (MRI) has proven to be a powerful diagnostic tool in medicine. In recent years, the clinical applications of MRI have expanded rapidly resulting in a significant increase in the number of MRI exams ordered. Nationwide Children's Hospital currently has six scanners and there are approximately over 12,000 scans performed on main campus every year. The MRI scanners utilize superconductive magnets which means that they are always "on" and that the magnetic field is continually present. Nationwide Children's employees from several disciplines are required to be present during an MRI scan, especially when the scan is indicated for a young child/infant or a critically ill patient. MRI technologists, radiologists, anesthesiologists, nurses, and other support staff must work collaboratively in the MRI suite daily. Since there are a variety of disciplines with varying educational and training backgrounds involved who need to accompany patient, safety practice in the MRI suite is a concern.

A recent "near miss" incident in MRI has prompted Nationwide Children's to update the MRI Safety Policy. The incident involves a staff member who transported an inpatient to the MRI suite. As the patient was being brought into the magnet room and prior to starting the MRI scan, the staff member unknowingly was carrying a pair of scissors. One of the MRI technologists stopped her before she entered the magnet room. Apparently she was not aware that the magnet is always "on." No one was injured and there was not any damage to the equipment. Nonetheless, this incident has resulted in tighter restrictions on employees entering the MRI suite environment. Highlights of the updated MRI policy are listed below.

- All Nationwide Children's employees must complete MRI Safety Module on an annual basis as part of CHEX.
- Nationwide Children's employees who routinely work in MRI must complete a MRI screening form and receive specialized MRI training.
- Anyone (employees, family, visitors) entering the MRI Department beyond the reception desk (Zone 3) must first check in with one of the MRI Safety Technicians. Removal of personal metal objects such as keys, cell phones, jewelry is required. Trays and lockers are provided.
- Anyone (employees, family, visitors) entering the magnet room (Zone 4) must be screened and escorted by one of the MRI technologists.

A new sign at the entrance of the MRI Department has also been erected to highlight these requirements to heighten safety awareness and encourage compliance.

Be prepared to remove the following items before entering the MRI environment:

Items include but are not limited to:

- Cell phones, pagers, voceras, iPods, iPads, Laptops
- All electronic devices
- Shoes or clothing items containing metal
- Belts with metal buckles
- All jewelry including watches, all piercings (wedding rings excluded)
- Hair clips or hair pins
- Wallet
- Credit cards/ driver's license
- Pocket knives, scissors, lighters, tools
- Eyewear containing any form of metal
- Keys
- Pens with metal components
- Other items which may be considered unsafe in the MR environment. Determination to be made by MRI staff.

Helping Children and Parents Prepare for an MRI

Amy LeRoy, BS, CCLS, Child Life Specialist, Radiology
Rebecca Hicks, BS, CCLS, Child Life Specialist, Radiology

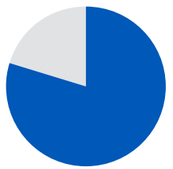
As child life specialists at Nationwide Children's Hospital Radiology Department, our job is to help educate children about upcoming procedures or diagnoses and to help them cope. For the past couple of years, we have been working with MRI (Magnetic Resonance Imaging) patients to help reduce anxiety around upcoming MRI appointments. Most of our time is spent helping children cope with the anesthesia work-up and intravenous line (IV) placement, or through teaching children to complete their MRI without sedation. About one year ago, we learned about something called a mock MRI scanner. The Radiology Department purchased a mock MRI scanner for use at Nationwide Children's. This new resource has been helpful in eliminating the need for sedation in MRI patients between the ages of 3 and 13 years.

Within the last few months, we began utilizing the mock MRI scanner to prepare patients for their upcoming MRI scans. We are one of the few children's hospitals who have started using this device for teaching. The mock MRI scanner looks comparable to a real scanner, but does not require a magnetic field or take any images. The mock MRI scanner also simulates the sounds that a real MRI scanner makes, which can be anxiety producing to young patients. It has a bed that patients can lie on and travel into a tunnel similar to a real scanner. A motion-tracking device is placed around the child's head so we can assess their ability to lie still and tolerate the MRI noises.

Allowing children to practice before they enter the real MRI scanner can provide them with a better understanding of the need to lie still, and can ease their anxiety with something that is unfamiliar to them. Some children have misconceptions about the MRI that can be cleared up by practicing. The mock MRI scanner can also increase confidence while reducing their apprehension.

The child life specialist can track how much the patient moves in the mock MRI scanner.

At Nationwide Children's, all MRI patients under the age of 8 are generally scheduled with sedation. Since August, we have utilized the mock MRI scanner to prepare 84 patients for their MRI. Of those patients, 67 of them were able to successfully complete their MRI without sedation.



67 out of 84 patients completed their MRI without sedation

If mock MRI teaching is something parents think will benefit their child, we encourage them to talk with staff during their pre-sedation phone call to set up an appointment. We also encourage parents to show their child the YouTube video "Experience the MRI Process (no sedation)" at home. This video is the first step in teaching children about having an MRI. A sedation work-up is completed on all mock MRI scanner candidates, so they do not have to reschedule their appointment if they are unable to complete their scan without sedation.

For some patients, watching a movie through movie goggles during the scan can be an option. The combination of practicing their role in the mock MRI scanner and then watching a movie for diversion during the real scan has helped numerous patients complete their scan without the use of sedation. Movie goggles are only offered when we are sure they are an option for a patient.

Some patients can wear movie goggles during their MRI.

There are many benefits to eliminating the use of sedation during an MRI. The mock MRI scanner has been particularly beneficial for children who require ongoing MRIs that are now able to complete the procedure without sedation. Patients scheduled without sedation do not have to follow NPO restrictions prior to their appointment and are only required to arrive 30 minutes prior to their scan time as opposed to 90 minutes. The patient's appointment time is much shorter since the sedation and recovery time are excluded. This also removes the risk associated with the use of anesthesia. Our goal is that the mock MRI scanner will reduce the need for sedation in many MRI patients. Our data so far suggest that this is true.

It has been exciting to meet with patients and their parents to offer this opportunity. Sometimes, even parents may be pleasantly surprised that their child is able to hold still for an MRI. We look forward to continuing to use the mock MRI scanner to help familiarize more patients with the MRI experience and help families to feel more at ease.

Increasing Therapy Services for Patients on Extracorporeal Membrane Oxygenation (ECMO)

Valerie Longbrake, OTR/L, Occupational Therapist, Inpatient Occupational Therapy Department
Nichole Mayer, OTR/L, Occupational Therapist, Clinical Lead of Inpatient Occupational Therapy Department

Inpatient Physical and Occupational Therapy have been working to increase activity in the most critically ill patients. The therapists have collaborated with the Extracorporeal Membrane Oxygenation (ECMO) team to provide intensive services to patients who are receiving this form of mechanical circulatory support. ECMO is a treatment method used to support patients with severe heart and lung dysfunction by providing the body with oxygenated blood from an external source. ECMO is often utilized to support a patient while they are awaiting a heart or lung transplant. Historically, patients on ECMO would remain sedated at all times and unable to participate in physical activity, personal care, or even communication with family.

Criteria to receive intensive therapy services for those on ECMO include: the patient must be at least 1 year of age, be cannulated through neck versus chest or femoral (to allow for therapeutic positioning), and not currently under heavy sedation. The therapist investigated and identified several tools to demonstrate functional progress in this population. Standardized assessment tools are typically not appropriate due to the patients complex care needs and limitations. Utilizing clinical experience and retrospective chart audits, the therapists determined the best method of documenting clinical progression would require a modification of the WeeFIM® tool. The WeeFIM® instrument, rates the patient's level of independence in 18 different self-care activities. Other tools to be utilized include the Pediatric Quality of Life Inventory™ (PedsQL) which measures quality of life in patients with acute and chronic health conditions, and the Functional Status Scale to determine cognitive function including communication and mental status. The final tools included are documentation of range of motion (ROM), strength, and edema. These tools were then grouped together and labeled the Mechanical Circulatory Support Assessment System (MCSAS). The goal of creating an assessment system is to utilize numerical data to demonstrate positive gains in patients, as well as providing a tool that is easily replicated in hospitals nationally.

Once deemed appropriate for services, the patient receives therapy once or twice a day for five to six days a week. The therapy teams work with the patient, families, and the nursing staff to identify the patient's interest in order to spark engagement in therapeutic tasks. Therapy activities include functional passive range of motion (PROM), active ROM, variety of strengthening tasks (e.g. therapy bands, putty), balance tasks (e.g., sitting edge of bed and standing), and bike activities (stationary arm/foot pedals or modified medical bikes). The goal of starting therapy early and increasing the patient's activity level is based on the premise that a patient will exhibit increased personal satisfaction and increased a sense of purpose when actively participating in functional and meaningful tasks. This intervention has increased the patient's overall endurance and increased the amount of time the patient tolerates being out of bed to engage in tasks such as crafts and music therapy. Another incentive to increase tolerance is socializing with peers via Skype and riding an adaptive bike around the unit.

The therapists are in preliminary stages of gathering the data through utilizing the assessment system (MCSAS) to demonstrate overall improvement. These improvements may not only be medical status and functional performance and physical domains such as joint swelling and stiffness, but most importantly, the patients' overall mood and feeling of self -worth. It is the therapy team's belief that patients feel better when they are able to utilize their bodies in a meaningful and purposeful manner. Providing intense therapy to our most critically ill patients who are on ECMO has certainly been a challenge; however, the rewards and benefits are now able to be documented and researched. This effort to increase functional engagement has been a true demonstration of interdisciplinary collaboration including not only among therapists and nursing, but also involving respiratory therapists, ECMO specialists, child life specialists, music and art therapists, and physicians.

Celebrate Nurses Week

May 6-12, 2015

Nationwide Children's is taking a new approach to Nurses Week events this year! Visit ANCHOR to view the full schedule of events. New highlights include presentations on Domestic Minor Human Trafficking, A Walk Down Memory Lane: A Discussion to Remember, Ice Cream Rounds and a FUN DAY to celebrate Florence Nightingale's birthday. Happy Nurses Week!

Donate Life: A Life-Saving Decision

Chris Badley, MSN, RN, CPN, Operating Room
Lauren Fitting, Community Outreach/Partnership Coordinator, Lifeline of Ohio

Innovations in organ transplantation are nothing short of life changing for thousands of Americans each year. The organ procurement process, preservation, peri- and postoperative management have changed drastically since the first successful human donor transplant in the 1950's. Despite significant advances in technology and management, the main challenge continues to be a shortage of suitable donors.

Because organ transplantation is unique in that the actions in one part of the country impact people in another, national oversight is necessary. The United Network for Organ Sharing (UNOS) is the non-profit organization that operates the Organ Procurement and Transplantation Network (OPTN) under contract with the U.S. Department of Health and Human Services on every transplant patient and donor in the United States. Individual state organ procurement organizations (OPO) align to the UNOS policies to ensure that life-saving organs are distributed fairly and successfully.

Unlike some medical conditions, with transplantation, the cure already exists, but is dependent upon the decision to donate. Most Americans say they support donation, but only a small percentage know how to legally document their decision. In July 2002, the State of Ohio established the Ohio Donor Registry to ensure that an individual's wish to be a donor is honored. It is critical to register your decision to donate because the opportunity for organ donation exists in approximately one percent of all deaths. For example, in 2013, only 288 Ohioans actually donated organs at the time of their death, and their Gifts of Life resulted in 962 life-saving transplants.

Ohio has four OPO's that coordinate the donation process. Established in 1985 as an independent non-profit organization, Lifeline of Ohio (LOOP) serves more than 70 hospitals, including Nationwide Children's Hospital, in 37 Ohio counties as well as Wood and Hancock counties in West Virginia.

Organs that can be donated include heart, lungs, liver, kidneys, small intestine and pancreas. Tissues that can be donated include heart valves, bones, tendons, ligaments, fascia, veins, skin, nerves and cornea.

LOOP recognizes that the staff's role in the donation process is crucial to its mission to realize every opportunity for donation. In March 2014, LOOP supported the efforts of staff members, Julie Hall, MA, PC, SWA, former In-House Coordinator Organ and Tissue Donation, and Chris Badley, MSN, RN, CPN, Operating Room, who committed to increasing awareness, restructuring education, as well as streamlining the Nationwide Children's organ procurement process. This partnership fostered the development of the following key innovations:

- Creation of Centennial Wall/Donate Life Display located in the Nationwide Children's Education Wing which is passed by many inpatient and ambulatory patients, visitors, and staff multiple times daily. This 82" w. by 92" h. display, exhibited throughout National Donate Life month in April, highlights LOOP, Donate Life month events, the need for donors, thank-you notes to donor families, recipient stories and how to register as a donor.
- Revision of the Operating Room's Organ Procurement Reference Manual to reinforce staff's knowledge and competency. This also improved Nationwide Children's staff's ability to collaborate with any outside procurement team to secure organs and/or tissue for transplantation.
- Collaboration with Ohio Health, Nationwide Children's Central Processing and Operating Room staff to build an Organ Procurement Set. This initiative streamlined the overall process of case preparation and implementation. The new Organ Procurement Set guarantees uniformity, reduces processing time and can accommodate the needs of as many as four procurement teams.
- Review and revision of the Operating Room's DCD (Donation after Circulatory Death) protocol designed to augment the staff's knowledge and skills pertaining to this donation option. Key points include scheduling guidelines, surgical consents specific for DCD donation, overview of the DCD procurement process and room set-up, patient management, family centered care, and patient expiration packet accompanied by post mortem care guidelines.
- Revision of staff education (RN's and Surgical Technologists) for organ/tissue procurement and organ transplants. The new mandatory requirements include a unit-based orientation class, completion of annual CHEX Solid Organ Transplant Education Module and annual unit based modules (DCD and Organ Transplant).

With LOOP's assistance, these initiatives are consistent with Nationwide Children's mission to promote advocacy for children and families everywhere as our organ and tissue recipients may be in-house or miles away. Donor families often share they are grateful for the opportunity for donation, which brings something positive and meaningful to an otherwise devastating time.

Education and support are important during this life-saving decision time. LOOP's Top 10 Facts About Organ and Tissue Donation have aided many families feel comfortable with their decision.

A single donor has potential to save the lives of eight people and enhance up to 50 more by donating vital organs, yet approximately 21 times each day a man, woman or child dies for lack of an organ transplant.

For more information about organ and tissue donation or to register your donation decision, please call (800) 525-5667 or go to LifelineofOhio.org.

LOOP's Organ and Tissue Donation Top 10 Facts

1. Your life is always first! Donor status is not considered until every effort to save your life has failed and death has been determined.
2. Everyone has the potential to be an organ and tissue donor no matter your age or health status.
3. Organ donation is not a given. If an individual dies and is not registered in the Ohio Donor Registry, the next-of-kin must make the donation decision.
4. All major faiths in the United States consider organ and tissue donation a generous act of caring.
5. There is NO cost to your family or estate for donation.
6. One person can save eight and heal 50 through donation.
7. Everyone is equal. Factors such as blood type, body size, location, level of illness and length of time on the wait list are used to determine the best candidate for an organ; not fame or wealth.
8. Your decision will be honored. If you are over 18, registered in the Ohio Donor Registry and identified as an eligible donor, your wishes will be honored.
9. You will be treated with respect. Plans for an open casket funeral should not be affected by donation.
10. Registering is easy. Sign up online at LifelineofOhio.org, fill out an enrollment form or say "yes" to donation when you visit the Bureau of Motor Vehicles to receive or renew your driver license, state ID card or learner's permit.

Establishing a Quality System for Hospital Wide Identification and Prevention of Venous Thromboembolism

Sheilah Harrison, BSISE, PMP, CPHQ, Quality Improvement Services
Riten Kumar, MD, MSc, Hematology/Oncology/Blood & Marrow Transplant

Venous thromboembolism (VTE), a condition that includes both deep vein thrombosis (DVT) and pulmonary embolism (PE), was historically thought to be rare in children. Epidemiological studies from Canada and the Netherlands estimated the incidence of VTE in children to be 0.07 – 0.14/ 10,000 children (and neonates) respectively. These studies also alluded to the fact that, unlike adults, VTE in children almost always occurs in the presence of co-morbid conditions. Presence of central venous catheter, congenital heart disease, cancer, nephrotic syndrome and inflammatory bowel disease are some conditions that are thought to predispose children to blood clots.

More recently, database studies from the United States have noted a dramatic increase in the incidence of VTE in children. This increase is more pronounced in tertiary care children's hospitals. It may be hypothesized that this increase comes from critically-ill children with multiple co-morbid conditions who are successfully managed in such centers. Direct mortality from VTE ranges from 1.5 – 2%. VTE may also result in a long term, debilitating side effect known as post-thrombotic syndrome (PTS) that is seen in about 25% of children with a history of VTE. Annual, mean health care expenditure in children with VTE ranges from $85,000 – $105,000.

The increasing incidence of VTE, particularly in hospitalized children, makes it incumbent upon us to try and better prevent this condition. Unfortunately, VTE prevention in children has not been systematically studied.

In 2012, a national focus on hospital-acquired VTE was initiated, guided by the Solutions for Patient Safety Collaborative. At Nationwide Children's Hospital, a VTE Steering Committee was established and consisted of two hematologists, a critical care advanced practice nurse (APN), and a quality improvement coordinator certified in project management. The primary objective of this initiative was to reduce the incidence of hospital-acquired venous thromboembolism in patients admitted to Nationwide Children's. Secondary objectives included: 1) obtaining engagement from various disciplines, services, and departments, 2) developing definitions of hospital-acquired VTE, 3) establishing strategies for identifying patients with VTEs, 4) determining patient level and associated event data elements, 5) instituting a standardized hospital-wide screening tool, 6) developing prophylactic recommendations for varying degrees of risk, and 7) establishing a non-punitive, timely huddle process to review qualifying events.

The team established several methods for identifying VTE events, referred to as "trigger tools," to alert the clinical team of potential cases of VTE that warrant review. The primary and most preferred trigger tool was radiology reports. Hematology consult reports were established as a secondary trigger tool to serve as a back-up to radiological reporting.

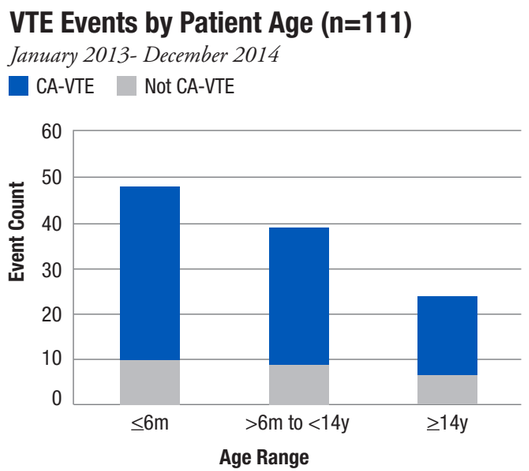
8 Categories of Risk

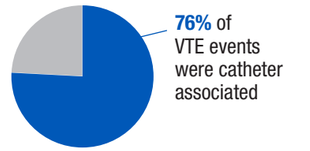
1. Immobility
2. Acute conditions
3. Chronic conditions
4. Central venous line
5. Risk medications
6. Body mass index
7. Smoking
8. Pregnancy

In September 2014, Nationwide Children's instituted an electronic screening form required for all patients 18 years and older, as well as patients 14 years and older who are being admitted to the ICU, surgery, or a trauma unit. It prompts nurses to score the patient on eight categories of risk: 1) immobility, 2) acute conditions, 3) chronic conditions, 4) central venous line, 5) risk medications, 6) body mass index, 7) smoking, and 8) pregnancy. The overall score was used to determine the level of risk and was correlated to prophylaxis guidelines.

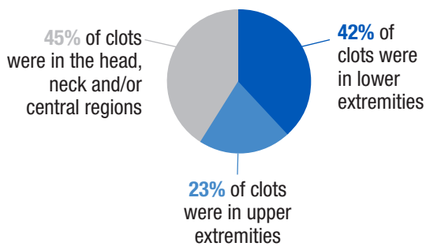
The hospital established standard prevention methods, often termed "prevention bundle," that consist of 1) risk screening, 2) ordering prophylaxis, and 3) applying/ administering prophylaxis. The clinical team worked with Professional Development and Information Systems (IS) to develop documentation and training sessions for attendings, residents, and APNs who are responsible for screening and ordering VTE prevention measures. Nurses were provided education, so they could properly document preventative interventions.

Twenty-four hours after admission of any adult or high risk adolescent (as defined by admitting location), a Best Practice Advisory (BPA) in the Electronic Medical record (EMR) is presented to the prescribing practitioner. Practitioners are prompted to click on a link to the risk screening worksheet. The user then completes the eight aforementioned prompts. Once all 8 prompts are completed, the practitioner is then presented with prophylactic recommendations based on the patient's age and level of risk. The BPA fires every 48 hours, unless there are active prophylactic orders in place.





The quality leader facilitates hospital-wide monthly reduction committee meetings to share event information, compliance results, upcoming changes, and to brainstorm interventions. In 2013 and 2014, and in all age groups, 76% of VTE events were catheter associated. The bar chart stratifies the events by age range. In the same population and time frame, clots were identified in the lower extremities 42% of the time and upper extremities 23% of the time; the remainder of events were in the head, neck, and/or central regions. In patients 14 years old or greater, 58% of hospital acquired events occur in the services of Pediatric Surgery, Hematology, and Pediatric Intensive Care.



The most successful aspect of the VTE initiative was that standards for detection, risk factors, and prophylaxis guidelines were developed and inspired hospital wide, which is a major step toward sustainment. The largest challenge in this journey remains the lack of clinical evidence supporting the benefit of prophylaxis in children.

Although we have not decreased VTE rates to date, we have seen an increase in the number of VTE events reported since program inception in January 2013. Based on experience in reducing other domains of harm (pressure ulcers, adverse drug events, etc.), increased event reporting could be attributed to better detection methods.

NATIONWIDE CHILDREN'S
When your child needs a hospital, everything matters.℠

Nationwide Children's Hospital
700 Children's Drive
Columbus, Ohio 43205-2696

Daisy Award

Naya Owens, RN

The eighth Nationwide Children's Hospital Daisy Award was awarded to Naya Owens, RN, a nurse on H10B. The Daisy Award is given in appreciation of the important difference our nurses make in the lives of the patients and families at Nationwide Children's. Naya was nominated by a family who frequently visits Nationwide Children's due to their child's chronic condition. "Our first experience was in 2012 when our daughter was three weeks old and had a shunt placed. We were so fearful of taking her home," the parent shared. "Through each surgery, Naya would help calm our fears and help us in our confidence in taking her home!" The parent also commends Naya and her great care in ensuring best outcomes. "Naya has been exceptional with her care and our comfort. She has sincerely listened to all of our concerns and has done everything in her power to make sure we were heard."

EVERYTHING MATTERS: IN PATIENT CARE, previously published as *Heartbeat*, is a quarterly publication of the Patient Care Services Division of Nationwide Children's Hospital, Inc., Columbus, OH. Comments regarding the content of this publication are welcomed. References for articles are available by calling (614) 722 -5962. Articles may be reprinted with permission. Send all inquiries and material for publication to EVERYTHING MATTERS: IN PATIENT CARE in care of Rosetta Gordon, Administration, Nationwide Children's Hospital, Inc., or call (614) 722-5962. Nationwide Children's Hospital is an affirmative action, equal opportunity employer.

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