2019 NURSING ANNUAL REPORT

UNIVERSITY of MARYLAND MEDICAL CENTER

NURSING

MAGNET RECOGNIZED
AMERICAN NURSES CREDENTIALING CENTER

"Medical Center nurses are dedicated to the highest quality of care, distinguishing themselves as leaders, educators, care providers and scholars."

LISA ROWEN, DNSc, RN, CENP, FAAN
Senior Vice President for Nursing and Patient Care Services
Chief Nursing Officer
University of Maryland Medical Center

NAT'E GUYTON, DM, MSN, RN, NE-BC
Vice President of Patient Care Services
Chief Nursing Officer
University of Maryland Medical Center Midtown Campus

2019 Nursing Annual Report

CONTENTS

LETTER from the CNOs

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Midtown Campus

Every day, nurses at the University of Maryland Medical Center fulfill our mission to create an atmosphere of exemplary patient care. They carry this mission into every corner of the Medical Center — the procedural areas, the intensive, intermediate and acute care units, and the ambulatory clinics. They shape and refine the UMMC mission as they conduct innovative research, translate findings into best practice and utilize evidence-based practices to improve patient care and care delivery. Medical Center nurses are dedicated to the highest quality of care, distinguishing themselves as leaders, educators, care providers and scholars.

As demonstrated by the exceptional feedback we receive on a regular basis from our patients, families, colleagues and surveyors, Medical Center nurses are the embodiment of excellence.

Every day, we witness the talent, skill, knowledge and expertise of Medical Center nurses and a strong nursing leadership team. The privilege of making a difference in a patient's life is the intrinsic reward of our profession and one we hold sacred. Our Nursing Annual Report is a wonderful opportunity to celebrate Medical Center nurses: Nurses who are willing and able to share their passion for excellence in patient care delivery. Nurses who bring merit and recognition to the Medical Center. Nurses who, in both quiet and heroic ways, are inspirational each and every day.

Sincerely,

Lisa Rowen Nati Guyton

LETTER from the CEO

The University of Maryland Medical Center has a long-standing reputation as an innovative, nationally renowned academic medical center. In partnership with the University of Maryland School of Nursing and the University of Maryland School of Medicine, one of the nation's oldest medical schools, we are committed to our mission of delivering high-quality compassionate patient care, educating tomorrow's health professionals, and discovering new ways to improve the lives of those we serve.

Our nursing professionals are integral to achieving this success. UMMC's accomplishments and future aspirations are directly linked to the skill and dedication of our extraordinary nursing staff. This year, our nursing staff received external validation of that expertise and devotion to their calling as we once again achieved Magnet re-designation at our downtown campus. Only 3% of hospitals in the country have earned the designation three times. This important and prestigious recognition positions UMMC among the best hospitals in the nation and is a strong validation of the culture of nursing excellence at UMMC. Our journey to achieve this designation at our midtown campus has also begun.

UMMC nursing continues to raise the bar for nursing professionals in the areas of research and discovery. Our nurses are on the front lines of innovation, partnering with nurse and physician scientists to advance patient care. Whether it is presenting at national conferences or publishing in scientific journals, UMMC nursing professionals are on the leading edge and raising the national profile of our institution. Professional nursing practice is supported by transformational nurse leaders who value patient-centered equitable care, safety and quality, collaboration, innovation and community outreach. This is evidenced by the excellent outcomes achieved by our nursing staff and highlighted in this report.

UMMC leadership is committed to being a world-class health care leader, and we are dedicated to supporting the nurses who make this possible. We applaud all of our nurses for another outstanding year of accomplishments, and look forward to achieving many more successes as together we continue to strive for excellence in our patient-centered mission.

As this year's theme represents, we are indeed "Better Together." I want to personally thank and congratulate all of you for your invaluable contributions to our patients, our teams and our community.

Sincerely,

> "We are committed to our mission of delivering high-quality compassionate patient care, educating tomorrow's health professionals, and discovering new ways to improve the lives of those we serve."

ALISON BROWN, MPH, BSN
President
University of Maryland Medical Center Midtown Campus
University of Maryland Medical Center Downtown Campus (Interim)

EXCELLENCE ACROSS UMMC

The University of Maryland Medical Center has made great strides in the past two years to fully integrate its downtown campus, where most ICU, cancer, complex surgery, and trauma care is provided, and the midtown campus that is home to certain priority services, such as opthalmology, diabetes, primary care, and ambulatory care.

Integrating and Coordinating Psychiatric Services

In Baltimore, as in most places in the United States, people who suffer from psychiatric illnesses frequent the emergency departments (EDs) for their primary care and social support. This is a consequence of a shortage of resources that these patients need, such as housing, community support, and state hospital beds. They come to the EDs in crisis and in need of admission for stabilization.

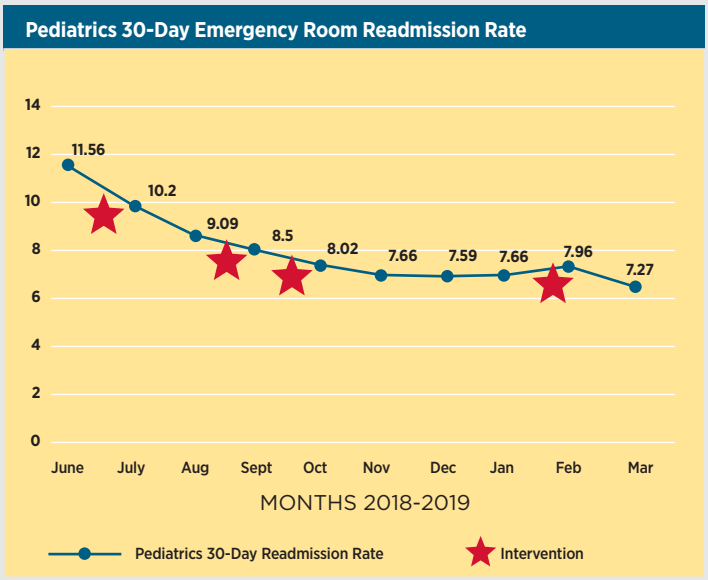
Nurses and other clinicians in the ED, as well as in the psychiatric units at both campuses of the University of Maryland Medical Center (UMMC), have worked to expand and improve psychiatric services so that these patients of all ages can be referred directly into the care they need. UMMC conducted a needs assessment in 2017 that identified the need for increased psychiatric services, including for the adolescent population.

UMMC leadership decided to support this underserved population and seek approval from the Maryland Health Care Commission to add an adolescent unit at UMMC's downtown campus. The first step was a major renovation at UMMC's midtown campus for expanding and improving two adult programs: the 37-bed Adult Inpatient Behavioral Health Unit and the Adult Psychiatry Day Hospital. These new services will allow the downtown campus to renovate its North 11 West unit to be a combined child-adolescent unit.

In May of 2019, the Maryland Health Care Commission approved the Certificate of Need to begin construction on a new combined child-adolescent inpatient behavioral health unit at UMMC's downtown campus.

Renovations to North 11 West began in the fall of 2019 with a goal to open by the end of summer 2020. Opening this unit will provide a new inpatient resource for adolescent patients.

By taking a holistic and coordinated approach to services across both of UMMC's two campuses, leaders in nursing and their colleagues can help patients stay on a road to recovery, rather than in a cycle of continual return to the ED.



Decreasing Pediatric Readmission Rates

University of Maryland Pediatrics at Midtown is recognized by the National Committee for Quality Assurance (NCQA) as a level 3 patient-centered medical home (PCMH) and provides comprehensive primary care for children from birth to age 18. In urban areas, repeat emergency department (ED) visits for pediatric minor health care needs are not uncommon, due to lack of access to primary care. To address this issue, nursing and clinic leaders launched a project to assess the impact of a nurse-led, interdisciplinary patient outreach program to decrease ED readmission rates. The goal was to increase outreach and access in order to improve this outcome.

In July 2018, an interdisciplinary team developed an outreach program that included guidelines and a new workflow to respond to clinic patients listed on the daily regional health information exchange. This list flags those requiring follow-up to prevent return visits to the ED.

To address transportation barriers, the team obtained additional resources to support families in accessing primary care. In early 2019, a pediatric community health worker joined the team to further identify barriers to care by making follow-up calls, informing patients about walk-in hours, and providing resources as needed to help parents bring their children for care.

Due to these efforts, UMMC has observed a decline in 30-day ED readmissions, from 11.56 in June 2018 to as low as 7.27 in March 2019 for pediatric patients (see graph). By continuing to develop and grow the outreach team's efforts, the expectation is to further decrease ED readmission rates by improving follow-up care for these patients.

ENGAGING WITH PATIENTS AND FAMILIES

Nurses lead initiatives across both UMMC campuses to enhance staff engagement with patients and their families.

Commitment to Sit – Improving the Patient Experience

To spend more time actively engaging with each of their patients, the nurses in the 3N and 3S Medical Units at UMMC's midtown campus developed a plan they call "Commitment to Sit." Since they began the plan in October 2018 with support from their nurse manager, Nancy Santos, MSN, RN, patients on these units have been registering higher satisfaction.

Nurses constantly must manage time and priorities to meet the demands of high-quality care. Finding time to build a relationship with each patient can seem like a luxury in a high-tech and hectic health care setting. However, the time must be reserved in order to promote positive nurse-patient communication.

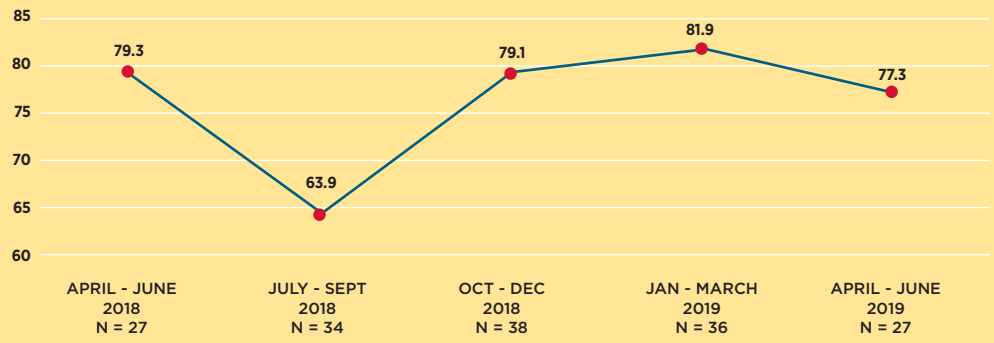
The "commitment to sit" (CTS) process ensures that a nurse will engage in a focused way with each patient for at least 1-3 minutes per shift. Stools were placed in each patient room to promote sitting, rather than standing, while communicating. Previous studies have shown that patients perceive that more time is spent with them when the provider sits, rather than stands. To instill full attentiveness to the patients while having this conversation, the nursing team decided to leave their work-station-on-wheels (a computer mounted on a mobile cart) outside of each of their patients' rooms.

To track compliance, nurses sign off on a tracking tool once the CTS is completed. The team then addresses the results during the daily morning unit huddle to review the commitment of the nurses to this process.

After CTS was implemented, the unit experienced a positive gain in the nurse communication categories in HCAHPS patient experience scores – from 63.9% in July-to-September 2018, to a high of 81.9% in January-to-March 2019 (see graph below).

The unit continues to monitor the commitment to this process as barriers for sustained success have been identified. To promote improved outcomes for the patient experience, the nurses have plans to refocus their energies to continue this value-added process in their everyday workload.

Midtown Campus 3 North, Top Box Scores by Discharge Date for CAHPS Communication with Nurses



Dionne Johnson, BSN, RN, with a patient


*HOB 30 degrees
*Clear Circuit Q4

PICU Connect Enhances Family-Centered Care

One of the most frequently asked questions from parents when their child is admitted to the hospital is, "How am I going to care for my child in the hospital and my children at home at the same time?" The nurses in the Pediatric Intensive Care Unit (PICU) at the University of Maryland Children's Hospital have an answer for them – *PICU Connect*. With *PICU Connect*, parents and other family members can be a part of their child's hospital stay even from home.

Every year, hundreds of patients are admitted to the PICU. The PICU team, including physicians, nurses, nurse practitioners, respiratory therapists, and ancillary staff, care for the most critically ill pediatric patients from Baltimore and across Maryland, and provide immediate post-surgical care for all pediatric cardiac surgery patients.

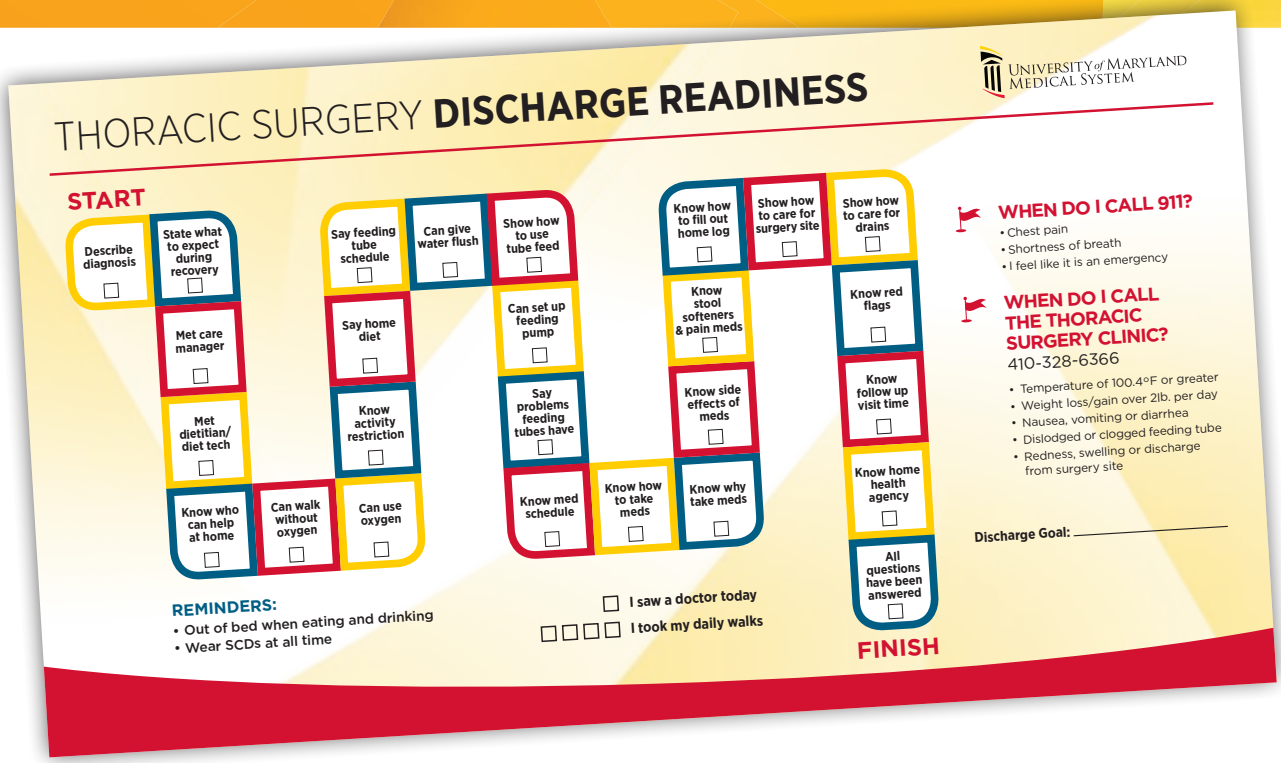
In 2018, the PICU leadership team, with the funds raised from an annual golf tournament, purchased a computer that has a built-in camera and a secure video conference application called Zoom. The care team can call the parents during rounds so that they can be part of the decision-making team. Parents can also call in to see their child throughout the day through live video. *PICU Connect* provides parents with a more interactive experience than simply calling their child's nurse on the phone.

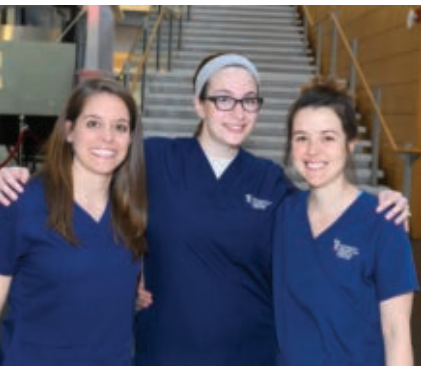
The care team can call the parents during rounds so that they can be part of the decision-making team. Parents can also call in to see their child throughout the day through live video.

Zoom allows parents the flexibility to care for their other children at home, go to work, and still have the opportunity to be a part of their hospitalized child's medical care. Through *PICU Connect*, the care team is ensuring that patients stay connected to their parents and families throughout their hospitalization.

The use of this technology was recognized as an exemplar by the Magnet appraisers during their site visit to UMMC in May 2019.

The mother (on screen) of a patient on the PICU checks in with her daughter and Annie Grace, BSN, RN, CPN, senior clinical nurse.





Left to right: Christine Hahner RD, LDN, CNSC; Sorah Levy, BSN, RN, SCNII, TIMC/SIMC; and Francesca Carhart, BSN, RN, PCCN, CNII

Journey Board: Using a Game to Prepare Patients for Discharge

When it's time to go home after serious thoracic illness and surgery, patients often receive a number of complicated instructions for taking care of themselves at home. It can be overwhelming. In the Thoracic Intermediate Care Unit (TIMC), the staff created a board game – the Journey Board – to enhance the way patients process all of this new information. The reviews are in – patients really like it.

The staff of the TIMC identified the need to improve discharge readiness for patients in 2017. An interdisciplinary team was assembled, which led to the implementation of daily interdisciplinary rounds (IDRs).

Although IDRs improved communication between team members, a gap remained with engaging the patient and family in discharge readiness. To address this, TIMC staff created the Journey Board, an interactive discharge-readiness board game.

Each square on the board game represents a skill or concept that thoracic patients need to learn and "teach back" to the nurse prior to discharge. To create a visually appealing game with content that suits the patients' needs, the TIMC staff collaborated with the Creative Communications team in the UMMS Department of Marketing, Communications and Community Health, as well as the UMMC Patient and Family Advisory Council.

A custom tool was built into the MyPortfolio (UMMC's patient portal) Patient Education tab for staff to facilitate and document education centrally. In October of 2018, the TIMC had a celebratory party to kick off the pilot version of the Journey Board. Over the next six months, the team refined the process through audits, patient interviews, and staff feedback.

The goals of this initiative were to decrease readmission and length of stay (LOS) and increase patient satisfaction in HCAHPS categories of Nurse Communication, Communication about Medicines, Discharge Information, and Care Transitions.

While the rate of readmission and the average length of stay did not decrease, patient satisfaction showed significant improvement. All four HCAHPS domains improved; even placing greater than the 90th percentile for three of the four categories. After six months of piloting and improving the Journey Board, the unit incorporated this valuable tool into the standard of care for the TIMC in April 2019.

Get to Know Me Boards Improve the Patient Experience

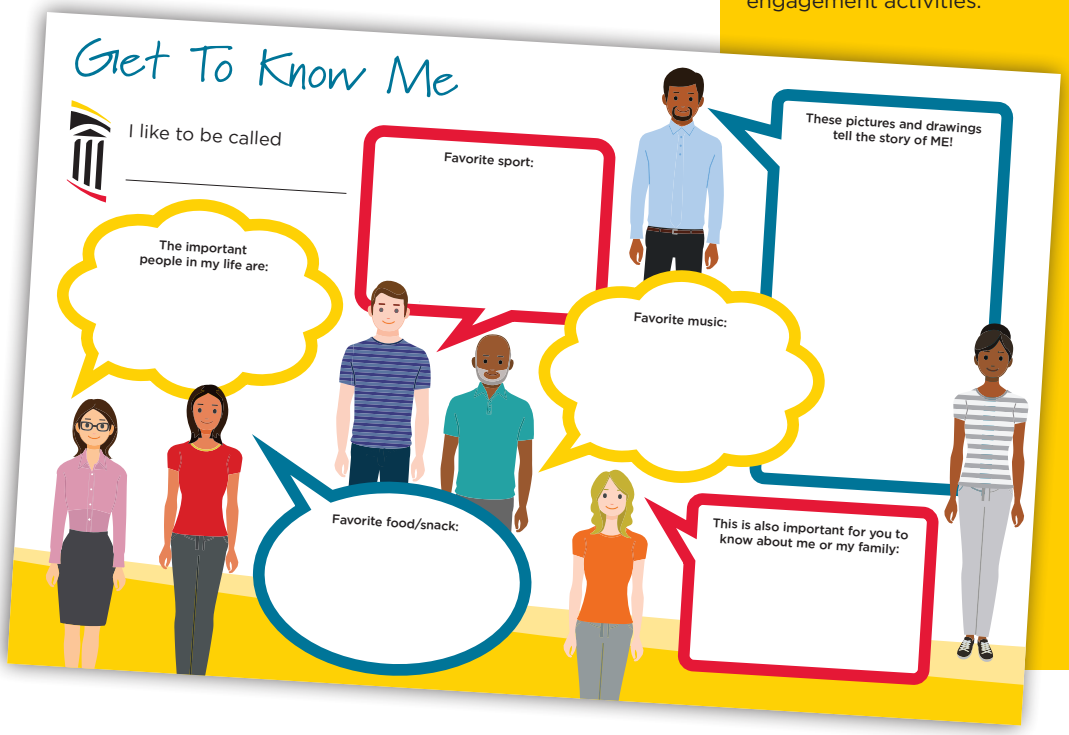
In May of 2018, nurses in the Medical Intensive Care Unit (MICU) embarked on a patient- and family-centered care initiative by creating and implementing the *Get to Know Me* board to improve the patient and family experience. This idea was adapted from the University of Washington Medical Center's *Get to Know Me and My Family* board, which was originally based on the theory of facilitated sense-making, by Judy Davidson, DNP, RN, FCCM, FAAN, of the University of California, Davis.

The board in use at UMMC includes specific categories that identify personal likes and preferences for the staff to know. The boards communicate patient personal information, including name preference, names of family members and pets, favorite TV shows and music, and much more.

The nursing team is responsible for completing the board upon admission. The patient or family member then places the board in the patient room in a visible place to allow all members of the interdisciplinary team to learn more about the patient.

Clinicians tend to focus on the diagnosis and forget that they may have something in common with their patients. These boards give insight in to the lives of the patients outside the Medical Center, ultimately helping caregivers become better healers.

Giora Netzer, MD, MSCE, associate professor of medicine at the UM School of Medicine and vice president for patient experience at UMMC, participated in the MICU kickoff for the use of the boards during unit shift huddles to show his support. Following the MICU launch and through the end of June 2019, the board and the reasons behind it were introduced to almost every unit in the hospital. The goal is for this practice to be carried out consistently in all units at UMMC and potentially in the other hospitals within the University of Maryland Medical System.



Neuro ICU Caregiver Café Provides a Forum for Family Engagement

The Patient and Family Engagement Council of the Neurological Intensive Care Unit (Neuro ICU) developed and implemented an informal family support group called "Caregiver Café" in April 2019. The purpose of this forum is to continuously support families, offer them an opportunity to ask questions, and share information on current family engagement activities.

At the café, which is held every Tuesday from 3 to 4 pm in the Gudelsky 7 Conference Room, families can find support, such as parking and discharge information, activity sheets, coloring books, and a publication of stories from those who have been patients in the Neuro ICU. Snacks are available for nourishment.

The café is facilitated by Julianna Hall, LMSW, social worker; Brigid Blaber, MS, RN, CNML, nurse manager of the Neuro ICU; Melissa Motta, MD, assistant professor of neurology at the UM School of Medicine; and Mary Ann Bautista, DNP, RN, CNRN, CCRN, SCRN, nurse educator. Other members of the unit's interdisciplinary team also participate to lead discussions and answer questions.

The response to the café has been very positive, with families appreciating a forum where they can provide feedback and find support from staff.

NATIONAL RECOGNITION

UMMC nurses continually strive to sustain the highest standards of nursing and to contribute to nursing practice and nurse-led research and innovation.

UMMC nurses at the 2019 National Magnet Conference celebrate the Medical Center's third Magnet designation.

UMMC Achieves Third Magnet Designation

Achieving Magnet designation is no small endeavor. Of the 502 Magnet-designated hospitals around the world, only 141 have achieved recognition three times, indicating how challenging it is to sustain this designation. Congratulations to UMMC nursing and the entire organization for achieving this prestigious recognition again in July 2019.

Silver-Level Beacon Award for Excellence

Multi-Trauma Intermediate Care-6 is the first R Adams Cowley Shock Trauma Center unit to be recognized and re-designated this year as a recipient of the silver-level Beacon Award for Excellence, the most highly regarded national nursing recognition for intensive and intermediate care units, from the American Association of Critical-Care Nurses (AACN). This prestigious award showcases a positive and supportive work environment with collaboration between colleagues and leaders, and signifies exceptional patient care through outcomes and overall satisfaction.

Nurses and nurse practitioners from Multi-Trauma Intermediate Care-6 celebrate their unit's silver-level Beacon Award.

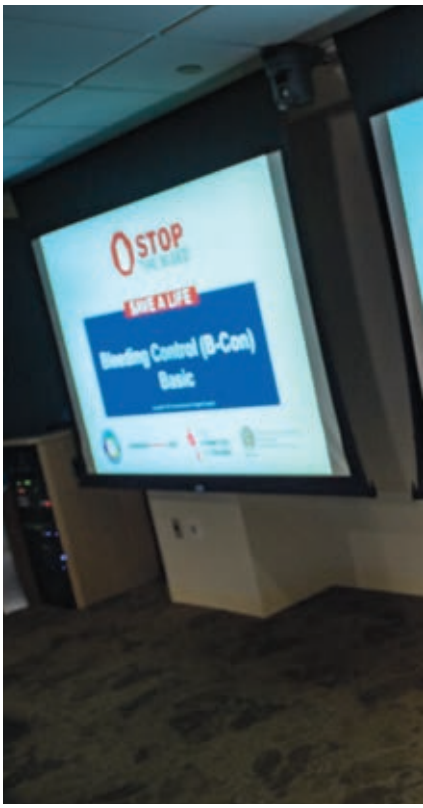
UMMC Earns National Recognition for Safety in Surgery

UMMC's general and trauma operating rooms have earned the Go Clear Award, bronze level, from the Association of periOperative Registered Nurses (AORN) for their achievement in eliminating hazardous smoke from its surgical procedures. The average daily impact of the surgical team inhaling the surgical smoke is equivalent to inhaling 27-30 unfiltered cigarettes. With this award, UMMC is demonstrating its deep commitment to the health and safety of its staff and community.

Nurses from the General Operating Room (in blue scrubs) and Trauma Operating Room (pink scrubs) won a Go Clear award from AORN for eliminating hazardous smoke from operating rooms.

COMMUNITY OUTREACH

Nursing has a rich and sacred tradition of reaching into communities to heal, to teach, and to help prevent illness and injury.



Alexandra Del Barco, BSN, RN, PCCN, TCRN, and Habeeba Park, MD, assistant professor of surgery, are among the staff who teach "Stop the Bleed" classes to clinicians and members of the community.

Preventing Injury

Most injuries – whether from falls, vehicle crashes or gunshots -- aren't accidental: There's often a way to prevent them. The programs below are coordinated through the Center for Injury Prevention and Policy (CIPP) at the R Adams Cowley Shock Trauma Center and led by Tara Reed Carlson, MS, RN.

Stop the Bleed

Stop the Bleed is a national awareness campaign and call to action. It is intended to cultivate grassroots efforts that encourage bystanders to become trained, equipped, and empowered to help in a bleeding emergency before professional help arrives. For FY 2019, a total of 154 trainings have been held with 4,936 people being trained, including at community locations such as schools, houses of worship, stadiums, large corporations, restaurants, and the state legislature – as well as Maryland Governor Larry Hogan.

Trauma Survivors Network

The Trauma Survivors Network (TSN) is a community of patients and families who are looking to connect with one another and rebuild their lives after a life-altering physical illness or injury. Frances Grissom, BSN, RN, coordinates the program. Former patients are trained to be peer visitors – providing essential, in-person support and encouragement to current patients as they navigate their new reality. In FY 2019, the TSN held 86 events, with 1,414 attendees, and 714 unique patient interactions.

Trauma Prevention Program

The Trauma Prevention Program provides information about the consequences of dangerous decisions so adults and teens can make a healthy, safe, and informed decision. In FY 2019, the Trauma Prevention Program reached approximately 10,800 teens, including 131 high-risk teens in Baltimore and in surrounding counties. It also reached 688 adult DWI/DUI offenders. The curriculum includes information about distracted and/or impaired driving and encourages insight and discussion for healthy decision-making.

Violence Prevention Program

The mission of the Violence Prevention Program (VPP) is to prevent violent personal injury among Baltimore's most at-risk populations through research into the root causes of violence and the development of evidence-based programs targeting the root causes of violence. Interpersonal and intimate partner violence is addressed through education for primary prevention and intense case management for victims who have been injured. In FY 2019, the program held 52 events reaching 136 individuals, and the team had interactions with 3,565 clients. The program is lead by Erin Walton, LCSW-C.

Minds of the Future

The Minds of the Future (MOF) program is a three-hour educational program to meet the needs of high school juniors and seniors interested in health careers. They are introduced to many of the careers available in the hospital and outpatient setting. In FY 2019, MOF held 26 events and reached 1,721 youth interested in health care careers.

Frances Grissom, BSN, RN, is the Trauma Survivors Network coordinator. Each year, the TSN sponsors the Shock Trauma Running Team in the Baltimore Running Festival. Runners and walkers of all abilities participate in the events to celebrate and raise awareness. At right is Homer Griffin, one of the patient survivors on the running team.

Marie Wells, MSN, RN, CNOR, nurse educator in Perioperative Services (far right) with EWHS students

Developing the Workforce and Mentoring Students for Health Careers

The Perioperative Services Department at University of Maryland Medical Center has engaged with community partners to provide clinical experiences to students and enhance workforce development within the Medical Center (UMMC).

UMMC partnered with Edmonson Westside High School (EWHS) to enroll 12 surgical technology students in clinical immersion experiences at three hospitals in the University of Maryland Medical System. The experience included simulation days and verification of skill competencies.

All 12 students successfully completed the program and six students continued in the program to pursue national certification. To date, four students have successfully completed the national certification exam.

In partnership with the Baltimore Alliance for Careers in Healthcare (BACH) and Community College of Baltimore County (CCBC), UMMC Perioperative Services obtained grant funding for an apprentice-based surgical technologist training program with a focus on two target populations: underemployed members of the refugee community and underemployed residents in West Baltimore.

The program received 48 applications, interviewed 30 of the applicants, and eventually selected five for the trainee program. The candidates worked three days per week at UMMC and attended classes at CCBC two days per week throughout the program. Four have successfully completed the program and obtained certification, and three are currently employed by UMMC as surgical technologists.

EXCELLENCE IN NURSING PRACTICE

UMMC nurses across both campuses seek excellence in their practice, using evidence and experience to continuously improve care.

Navigating Toward Better Care for Patients with Sickle Cell Disease

As part of UMMC's ongoing effort to better serve patients with sickle cell disease, the Adult Emergency Department at the downtown campus created a new role: the sickle cell nurse navigator. Ellen Dupont, BSN, RN, was a staff ED nurse for six years before transitioning into the new role in December 2018.

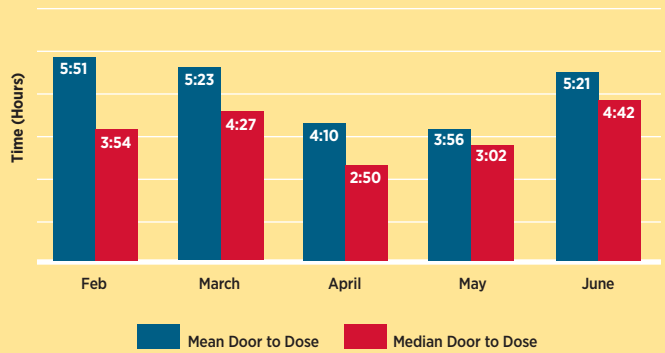
Originally funded as a pilot by a combination of external grants and hospital support, the role was renewed in June 2019 after positive feedback. DuPont had conducted surveys of staff and patients with sickle cell disease, in order to identify areas for improvement in their care in the ED. She conducted the surveys in collaboration with R. Gentry Wilkerson, MD, assistant professor of emergency medicine at the University of Maryland School of Medicine and an attending physician in the ED at UMMC.

Sickle cell disease is an inherited blood disorder characterized by recurrent infections, fatigue, necrosis of bones and joints, and severe, unpredictable episodes of pain. In the United States, the disease occurs almost exclusively in African-Americans and, as a result, research and treatment have long been underfunded.

Based on the results of DuPont and Wilkerson's survey, the program has identified three primary goals: to improve the consistency and speed of treatment in the ED; to facilitate conversations between patients and staff both in the ED and on the inpatient floors; and to convene monthly multidisciplinary care-coordination meetings focusing on the most medically and socially complex patients, writing and implementing care plans that span ED, inpatient, and outpatient follow-up care.

Although June showed an unexpected rise in average wait times, the overall trend has been toward faster door-to-treatment times, which in turn has allowed more patients to avoid hospital stays.

Mean and Median Door-to-Treatment Time for Sickle Cell Patients 2019



Ellen Dupont, sickle cell nurse navigator, with a patient

Using Teach-Back to Ensure Patient Health Literacy

Studies indicate patients immediately forget 40% to 80% of the health information they receive, and nearly half of the information they say they remember turns out to be incorrect. Effective patient and family education is essential for patient safety, regulatory compliance, and economic survival of health care organizations. The Interdisciplinary Patient Education Council at UMMC implemented the teach-back method as a part of a multiphasic evidence-based practice project to ensure an effective, structured approach to patient education.

Teach-back validates patient and family understanding and identifies gaps in knowledge by having the learner repeat back what they learned. This allows nurses and other care team members to determine areas for teaching reinforcement efficiently. Effective education provides patients the information needed for successful self-care.

Teach-back implementation was carried out in three phases. During Phase 1, members of the council collected patient feedback and observed clinicians in their patient education practices.

For Phase 2, more than 2,500 clinical staff completed a teach-back module from the Agency for Healthcare Research and Quality (AHRQ). Staff were also asked to complete the AHRQ Conviction and Confidence Scale (CCS). Council members added new resources to the intranet and updated both the new nurse orientation blueprint and preceptor boot camp to include teach-back.

Phase 3 focused on reinforcing teach-back. Council members developed a patient education handout and staff tip sheet. Staff completed a teach-back refresher and post-implementation CCS.

Following teach-back implementation, clinicians began to include these evidence-based teaching principles in patient education and were significantly more likely to ask patients to explain in their own words, avoid asking yes/no questions, and to explain and check again. Data from CCS scores showed that nurses and other health care team members were also more convinced teach-back was important and more confident in their ability to use teach-back.

Patients benefited from teach-back, and over 70% of patients reported that there was nothing staff could do to improve upon related to their teaching.

Likewise, HCAHPS top-box scores for nurses "explaining things in a way you understand" increased from 73% (PY17) to 76% (PY18) and 77% (PY19 to date). Discharge information scores improved from 88% (PY16) to 92% (PY18) and 91% (PY19 to date).

Teach-back provides clinicians with an evidence-based method to ensure that patients understand what they need to do to manage their health care demands. All members of the interdisciplinary team should use teach-back throughout the hospitalization. Teach-back, when done routinely, has the potential to improve readmission rates, patient comprehension and satisfaction, self-care, medication adherence and overall health outcomes.

Intervening to Help Patients Find Treatment and Support After Overdose

With millions of Americans struggling with substance use disorders, hospitals and case managers are overburdened, overwhelmed, and in search of solutions. In Maryland, an innovative program called SBIRT (Screening, Brief Intervention, Referral to Treatment) is able to serve patients who have substance use disorders while also taking some of the stress off clinical professionals. SBIRT is an evidence-based practice used to identify, reduce, and prevent problematic use, abuse, and dependence on alcohol and illicit drugs.

UMMC's midtown campus has implemented SBIRT in the Emergency Department and on its inpatient units. Through this program, individuals with substance use and mental health disorders have been successfully steered into treatment through the use of peer recovery specialists or recovery coaches.

The job of this specialized counselor is to first screen adult patients to identify those with substance use disorders. After the initial screening, they encourage those individuals to seek treatment and match them with community-based treatment providers.

Peer Recovery Team members at UMMC's midtown campus

The peer recovery coach has many different roles: motivator, advocate, educator, mentor, and perhaps a bridge to the next step. Here at UMMC's midtown campus, the peer recovery specialists have conducted more than 2,000 linkages to addiction and/or mental health treatment services since the SBIRT program went live in July 2017.

Shift Change Handoff: Refining Nurse Communication

UMMC nurses and nurse leaders wanted to find a way to standardize the handoff between nurses at shift change, in order to improve patient safety outcomes, quality of care, nurse communication, and patient experience. In early 2017, the Clinical Practice Council implemented a patient-centered process to achieve this. The council was chaired at the time by Mindy Ralls, BSN, RN, FCCS, senior clinical nurse II in the Surgical Intensive Care Unit.

One year later, in January 2018, the council designed a new shift change handoff (SCH) plan to re-engage nurses across the organization with support for this endeavor from the SCH taskforce champions and Nursing and Patient Care Services Leadership Team, including Lisa Rowen, DNSc, RN, CENP, FAAN, senior vice president of patient care services and chief nursing officer for UMMC, and Kerry Sobol, MBA, RN, director for patient experience and commitment to excellence.

Since implementation of this handoff, UMMC's patient satisfaction survey results consistently revealed that patients who indicated that the shift change handoff "Always" happened, rated the overall Nurse Communication survey domain in the 97th percentile nationwide. Additionally, the scores for the three standard questions that comprise the Nurse Communication survey domain continued to increase.

Although the final score for this domain was 79.7% for performance year 2018 (goal = 81.8%), those patients who answered the additional custom question specifically asking about shift change handoff scored at 90.8% for "Always," placing UMMC in the 97th percentile for Nurse Communication (see graph 1).

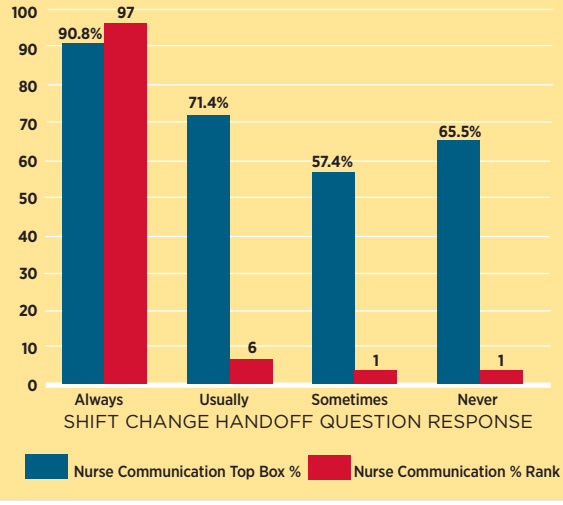
Due to a decline in the "Always" scores for shift change handoff in early 2019, the SCH taskforce champions focused on new efforts to revitalize the focus around this process. This included adding the SCH education handout to the new standardized admission-to-discharge folders provided to patients and families in January 2019. In March 2019, the task force focused on providing additional nurse and family education to promote the highest level of engagement for all.

The SCH champions rounded on units, interviewed patients and families asking if SCH was completed with them, and attended huddles to re-energize and re-educate staff on the importance of SCH.

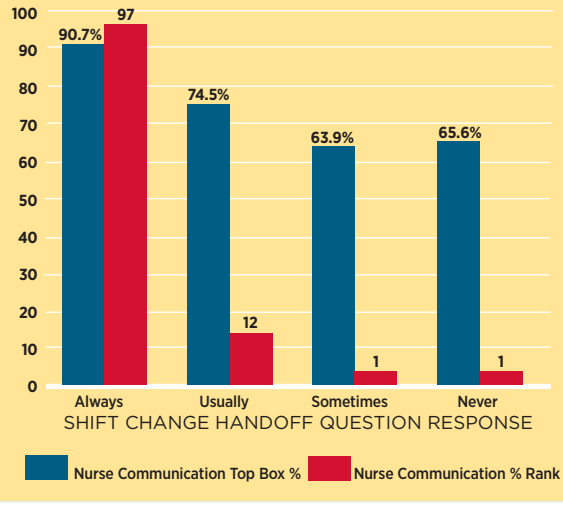
By the end of June 2019, for patients answering the standard questions and the custom question specifically about shift change handoff occurring responded 90.7% for "Always," landing UMMC in the 97th percentile for the Nurse Communication domain (see graph 2). The Nurse Communication score overall (with or without answering the SCH custom question) also increased to 81.0% in April 2019 and 87.7% for both May and June 2019, exceeding the performance goal of 81.8% to date.

Based on the survey scores at UMMC, integration of shift change handoff into practice is improving the patient's perception of nurse communication per the standard and customized patient satisfaction questions.

Graph 1: Nurse Communication Performance Based on Shift Change Handoff Custom Question Response October 2017-September 2018



Graph 2: Nurse Communication Performance Based on Shift Change Handoff Custom Question Response July 2018-June 2019



Project Soundwave: Innovation in Education

Central line-associated bloodstream infections (CLABSI) are a major safety risk that impacts patients. In July 2017, Brian Le, MS, RN, CCRN, CNL, senior clinical nurse II, Medical Intensive Care Unit, completed a root-cause analysis of the MICU nurse workflow that identified a strong correlation between central line insertion and IV insertion proficiency. To reduce CLABSIs, Le and his colleagues developed "Project Soundwave," an educational program to increase peripheral IV insertion proficiency of the unit nurses.

The program is based on a gaming concept that rewards nurses with points for successful IV insertions and ranks achievement as the nurses continue to insert more IVs successfully. This reward system sparked an intense level of engagement and competition.

In the beginning, the participants in the game started by winning stickers to place in a notebook. As popularity grew, participants documented their IV insertions on their cell phones using a QR code app to make it more interactive, taking the competition to a higher level.

Le and his team used the collected data to tailor and target education throughout FY 2019. After one year and 59 participants, the number of MICU central-line days per patient decreased overall by 10.5% and the CLABSI rate decreased by 45%.

In FY 2019, the MICU nurses continued to use this process to improve insertion and utilization of peripheral IVs versus central lines. Due to vascular access changes of hemodialysis catheters, the unit experienced an increase in CLABSIs in FY 2019 (see table below). The team is currently addressing these challenges utilizing the outcomes and Project Soundwave data to refocus education efforts aimed at reducing the number of infections in FY 2020.

In May 2019, Le presented this work in a poster presentation, "Project Soundwave: Leveraging Ultrasound Guided IV Insertion and Gamification to Reduce CLABSI," at the National Teaching Institute and Critical Care Exposition.

Medical ICU Central Line Data by Fiscal Year

Fiscal Year	Number of Blood-stream Infections	Central Line Days	CLABSI Rate	Patient Days	Device Days
FY16	9	5882	1.53	9925	0.59
FY17	11	6014	1.83	9776	0.62
FY18	6	5589	1.07	10148	0.55
FY19	11	5732	1.95	9934	0.58

Cardiac Surgery Intensive Care Unit Hospital-Acquired Infections by Calendar Year

Type of Infection	Cases in CY17	Cases in CY18	% Decrease
CAUTI	9	3	67%
MRSA	1	1	NA
CLABSI	8	2	75%
C-diff	11	5	55%

Infection Prevention Liaisons Improve Safety on Units

According to the Agency for Healthcare Research and Quality (AHRQ), approximately 25% of patients in the United States experience a health care-associated infection (HAI) during their hospital stay. HAIs include central line-associated bloodstream infections (CLABSI), catheter-associated urinary tract infections (CAUTI), Clostridium difficile (C-diff) and methicillin-resistant Staphylococcus aureus (MRSA). In October 2017, UMMC launched a new infection prevention champion (IPC) role and program. The Cardiac Surgery ICU (CSICU) manager, Stacy Foertsch, BSN, RN, and nursing director, Cindy Dove, MS, RN, embraced this role and provided dedicated time for the unit IPC, Emma Lima, BSN, RN, clinical nurse II, to solely focus on HAI prevention in the CSICU.

Through the hard work of the CSICU team led by Lima, the unit was able to significantly decrease HAI rates. From calendar year 2017 to 2018, total CLABSI rates decreased by 75%, CAUTI rates by 67%, and C-diff rates by 55% (see table above). According to the AHRQ, the national average for each CLABSI contributes to an 18% mortality rate and costs approximately $45,254. In CLABSI-rate reduction alone, the CSICU was able to prevent patient deaths and potentially save $271,524 in quality-based reimbursement. As of September 2019, CSICU has achieved zero MRSA and CAUTI infections; one C-diff infection and three CLABSI infections. The CSICU sustains low infection rates through continuous leadership involvement and collaboration with the unit-based Do No Harm Committee.

Lauren Chon, BSN, RN, a labor-and-delivery nurse, with an expectant mother who has just arrived on the Obstetric Care Unit.

Refining Postpartum Care for Newborns and Mothers

In order to promote bonding, the the nurses on the Obstetric Care Unit (labor and delivery) wanted to find a way to keep babies on the unit while their mothers recovered postpartum. Providing care for transitioning newborns was a new experience for the labor-and-delivery staff. The nurses were often torn between focusing on mothers who still needed their attention and closely observing newborns.

Nicole Sweeney, BSN, RN, of the Obstetric Care Unit, and Lauryn Rose, BSN, RNC-NIC, of the Neonatal Intensive Care Unit, each of whom is a senior clinical nurse II, helped to develop a new nursing role – the newborn admission and assessment nurse (NAAN). They visited other facilities that already utilized a NAAN, then developed guidelines and began recruiting.

Christina Bolling, BSN, RN, clinical nurse II, and Gabrielle Naldo, BSN, RN, senior clinical nurse I, teamed up with Melissa Quinn, BSN, RN, senior clinical nurse I, from the Mother-Baby Unit, where the baby and mother move to after delivery in the Obstetric Care Unit. Bolling and Quinn were the first to fill the role of the NAAN. As nurses on the Mother-Baby Unit, they already had a firm grasp on the clinical details of newborn care. In collaboration with Sweeney and Rose, they developed responsibilities and an orientation program for the NAAN.

These nurses divided their time between the two units, each doing one shift per week on the Obstetric Care Unit. They also helped to orient others interested in the role, so that they were more comfortable providing care for newborns.

Previously, a family might expect to bond with their baby for a short time before the infant was whisked away to the full-term nursery of the Mother-Baby Unit. Now, babies remain on the Obstetric Care Unit until the mother is ready for transfer, eliminating the need to separate mom and baby. Mothers who remain on the unit for prolonged periods of time can now keep their baby with them for most of their stay.

This has helped to provide family-centered care at a time when it is needed the most and would not have been possible without the efforts of these nurses.

INTERPROFESSIONAL COLLABORATION AND RESEARCH

As partners in academic, research, and clinical initiatives to improve patient care, nurses collaborate with physicians, rehabilitation therapy staff and other clinical partners at UMMC.

From left to right: Kathleen Ruehle, RN, BMTCN, senior coordinator and manager for the Blood and Marrow Transplant (BMT) Program; patient Charles "Chip" Baldwin; Elizabeth Hutnick, BSN, RN, coordinator in BMT; and Aaron Rapoport, MD.

Nurse Training Across Units Contributes to Success of CAR T-cell Therapy

The US Food and Drug Administration approval of CAR T-cell therapies for certain blood cancers has forever changed the available treatment options for patients who have failed to respond to multiple other therapies. But the ability to provide this cutting-edge immunotherapy also presents unique challenges for nurses and doctors, requiring a higher level of collaborative care across specialties to ensure patient safety and positive outcomes.

Patients who receive customized therapy with their own genetically engineered immune cells are at risk for severe side effects such as cytokine-release syndrome and neurotoxicity, which are treated utilizing specific algorithms that guide nursing practice.

The University of Maryland Medical Center (UMMC) began preparing to offer CAR T-cell therapy in late 2017. As part of this preparation, nurses underwent specialized training to learn how to safely care for these patients. In particular, the training was provided for nurses in the University of Maryland Greenebaum Comprehensive Cancer Center (UMGCCC), the Medical Intensive Care Unit (MICU), the Neuro Intensive Care Unit, and the Emergency Department.

When doctors at UMGCCC treated the first patients in early 2018, collaboration with nursing teams became invaluable, as illustrated in the care of Charles C. Baldwin Jr., 63, the second patient to receive this groundbreaking Yescarta CAR T-cell therapy at UMGCCC.

Mr. Baldwin was referred to Aaron Rapoport, MD, the Gary Jobson Professor in Medical Oncology at the UM School of Medicine and director of the blood and marrow transplant at the UMGCCC. Mr. Baldwin became a candidate for CAR T-cell therapy after his cancer – an aggressive B-cell lymphoma – failed to respond to chemotherapy. Mr. Baldwin was approved for Yescarta treatment due to the work of the cellular therapy nurse coordinators who embarked on a rigorous approval and authorization process. Mr. Baldwin underwent extensive testing and patient education. Apheresis nurses collected his T-cells, closely monitoring his safety throughout the process, which can take several hours. The cells were then sent to a laboratory where they were genetically modified to seek out and destroy his cancer once they were infused back into his body.

Three weeks later, Mr. Baldwin's newly modified CAR T-cells arrived at UMMC for infusion. Mr. Baldwin received three days of chemotherapy in the Stoler Infusion Center to prepare his body to accept the T-cells. The infusion nurses provided support and education to the patient during this critical time.

After receiving chemotherapy, Mr. Baldwin was admitted to the Blood and Marrow Transplant (BMT) Unit for the CAR T-cell infusion. On the first day, his nurse infused his 64 milliliter bag of CAR T-cells back into his body. The nurses and technicians on the inpatient unit worked diligently to monitor Mr. Baldwin for any change in condition. This monitoring included neurologic screenings every four hours, along with

close monitoring of vital signs and lab values.

The day after the infusion, Mr. Baldwin developed a high fever and shortness of breath. Due to the severity of his symptoms, doctors transferred him to the MICU for closer monitoring and care. The collaboration between the pulmonary and cell therapy teams facilitated a seamless transfer to the higher level of care. As a result of the specialized training that all teams received prior to initiating CAR T-cell therapy at UMMC, the MICU nurses were prepared to care for Mr. Baldwin after a seamless transition. The MICU team provided a supportive environment for both the patient and his wife.

Four days later, Mr. Baldwin was transferred back to the BMT Unit and discharged eight days after he received the infusion of his modified immune cells. Nurses in the Stoler Pavilion saw Mr. Baldwin for daily clinic visits, providing support and care coordination. After eight weeks, Mr. Baldwin was found to be in a complete remission.

"The nurses were not only very caring and friendly but also showed superior knowledge with this brand new therapy, " Mr. Baldwin said. "I always felt confident that the nurses would effectively handle any issues that might – and did – arise. Thank you for all you do for us!"

UMGCCC has treated more than 70 leukemia and lymphoma patients with CAR T-cell therapy, including some who participated in clinical trials. The UMGCCC is currently also treating patients in clinical trials aimed at expanding the use of CAR-T for additional cancer diagnoses.

Oncology Nurse Navigators Collaborate with Professor to Develop Electronic Toolkit for Survivors

As more patients survive cancer, UMMC has added a new dimension of care for the specific needs patients have after treatment at the University of Maryland Greenebaum Comprehensive Cancer Center (UMGCCC).

Transitioning from active cancer treatment to the post-treatment phase can be stressful. Survivors are at risk for being lost during this transition and missing out on the close follow-up that they need. The challenge is to provide meaningful and ongoing patient-centered care and support.

To better engage with survivors and manage their needs post treatment, two UMGCCC nurses and a professor at the University of Maryland School of Nursing (UMSON) teamed up to lead a research team to develop the Cancer Survivorship Patient Engagement Toolkit (CaS-PET). The project was funded by a grant from the Pi Chapter of Sigma Theta Tau.

Mary McQuaige, BSN, RN, OCN, and Nancy Corbitt, BSN, RN, OCN, CRNI, both oncology nurse navigators at UMGCCC, and Eun-Shim Nahm, PhD, RN, FAAN, professor at the UMSON, led the development and eventual pilot test of the electronic CaS-PET toolkit.

The CaS-PET allows cancer survivors to directly engage with an oncology nurse navigator (ONN) to manage and improve their own health. The goals of CaS-PET are to engage patients in their cancer survivorship care, foster communication between the ONN and patients, and ultimately improve the quality of survivorship care by offering online support beyond cancer treatment.

The pilot study involved 30 cancer survivors who participated in online surveys, focus groups, and Well Beyond Cancer, an online support program with patient portal (PP) e-messages, online educational resources, and a discussion board.

McQuaige and Corbitt identified eligible participants, developed and delivered survivorship care plans, and engaged with patients based on PP and discussion board communications. Findings from the study showed that patients reported significant and frequent treatment-related symptoms, such as lack of energy (77%), pain (63%), and fear of recurrence (50%). Multiple interactions with participants led to ONNs providing further resources, as well as referrals to support specialists, including nutrition services and mental health services.

The CaS-PET experience has been positive for both the patients and ONNs.

One patient who provided feedback reported, "The plan helped me move from treatment to living in the present. I was stuck in the cancer mode and the plan enabled me to see a future in survivorship."

Another reported, "It gave me a better understanding of the importance of obtaining knowledge pertaining to my treatment and proper questions to ask."

ONNs were instrumental in empowering survivors in setting realistic goals and promoting a healthy lifestyle. The study demonstrates the benefit of expanding this program to address common concerns during post-treatment survivorship and beyond. McQuaige, Corbitt, and Nahm have presented their findings at regional and national conferences. The team has also published a manuscript on the topic and applied for additional grant funding to conduct a larger study.

Also working on this project were Nicholas Jaidar, MHA, FACHE, of the UMGCCC, and Hyojin Son, MSN, RN, a doctoral student at the UMSON.

Nancy Corbitt, Mary McQuaige, and Eun-Shim Nahm

Coordinating Care for Patients with Head and Neck Cancer

Noting the need for better outcomes for post surgical head and neck cancer patients, the nurses in the UMMC Ear, Nose and Throat (ENT) Ambulatory Clinic created a care coordination program.

Until June 2017, the clinic had limited care coordination for patients, including patient education and post-operative instructions. This limitation detracted from the patient experience and led to a high level of readmissions for this patient population.

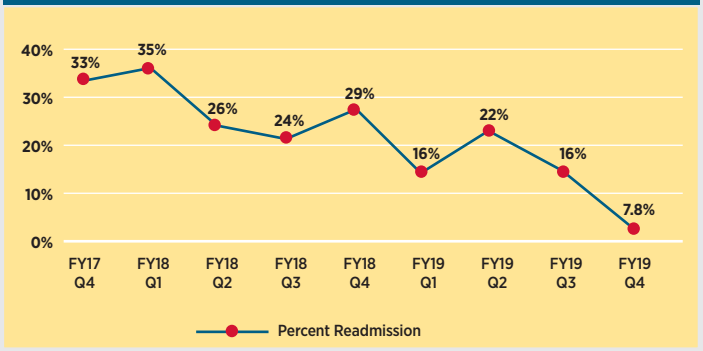
The effort to create the coordination program was led by ENT clinic nurses Julie Caprio, BS, RN, CORLN, senior clinical nurse I; Jessica Barnett, BSN, RN, clinical nurse II; and Karen Lyons, MSN, RN, CCHP, nurse manager.

The nurse leaders of the program attribute its success to the interdisciplinary design team, which included input from Grace Snow, MD, chief resident in otorhinolaryngology for FY 2019; Jeffrey S. Wolf, MD, FACS, professor of otorhinolaryngology at the University of Maryland School of Medicine and medical director of the clinic; dietitians Caroline Meehan, RDN, CSOWM, LDN, and Kaitlin Schotz, RD, CSO, LDN, in the UMMC Department of Clinical Nutrition; and several members of the Social Work staff.

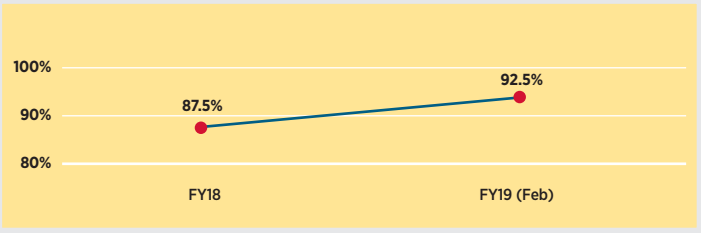
The goal of the program was to proactively identify potential barriers to reduce stress, post-operative complications, and potential readmissions for patients in the ENT Clinic. Many interventions were evidence-based and others were creative approaches to old problems, resulting in success for all involved (patients and their families, providers, nurses, and the entire ENT support team).

As a direct result of the nurse care coordination interventions, from FY17, Q4 (April-June 2014) through FY19, Q3 (Jan-March 2019), readmission rates decreased from 35% to the current rate of 7.8% (see graph 1). Patient experience scores in relation to "instructions for follow-up care" and "likelihood to recommend practice" also increased from FY18 to FY19 (see graphs 2 and 3).

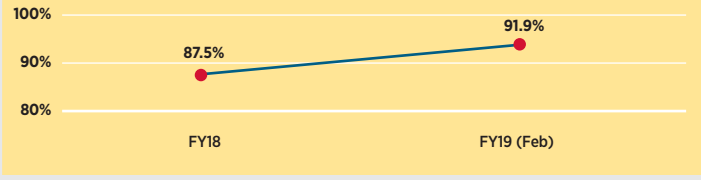
Graph 1: 30-Day Readmission Rates of Head and Neck Cancer Patients



Graph 2: Patient Experience Scores for "Instructions for Follow-Up Care" in Head and Neck Cancer Patients



Graph 3: Patient Experience Scores for "Likelihood to Recommend Practice" in Head and Neck Cancer Patients



UMGCCC Implements Evaluation and Treatment Center

In September 2018, the Stoler Pavilion, the University of Maryland Greenebaum Comprehensive Cancer Center's outpatient center, implemented an Oncology Evaluation and Treatment Center (ETC) to manage the complex symptom management needs of oncology patients. From September to December, the ETC treated 193 patients. The top five complaints were dehydration (36%), anemia/thrombocytopenia (16%), fever (8%), gastrointestinal disturbances (7%), and pain (6%). Average weekday Emergency Department visits decreased by approximately 23%.

Stoler Center infusion nurses Ashley Chalk, BSN, RN, clinical nurse II (seated), and Julie Reback, CRNP, oncology nurse practitioner, confer about a patient.

Post-Discharge Phone Call Impact on Readmission Rate and Patient Experience

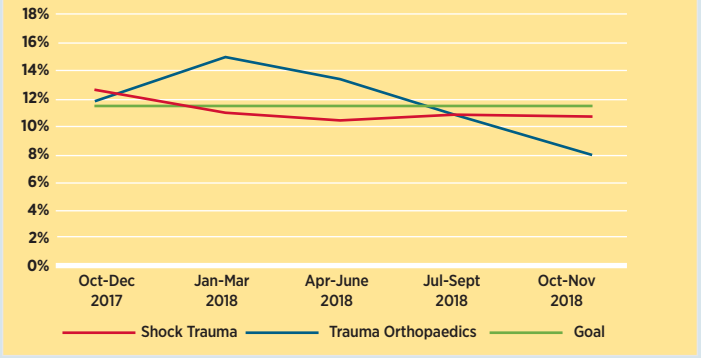
In February 2018, the medical, cardiology, and trauma orthopaedic units conducted a pilot program to determine whether post-discharge follow-up phones calls would improve the patient experience at UMMC.

The initial results from the pilot indicated an improvement in the UMMC overall patient satisfaction scores for the "Care Transitions" category. After the success of the pilot, the entire Shock Trauma Center and cardiac surgery units implemented post-discharge follow-up phone calls in August 2018.

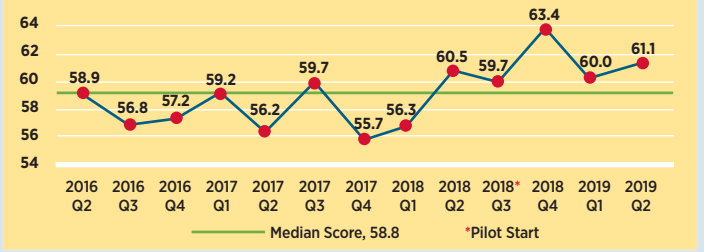
By October 2018, this program had reduced unplanned readmissions on all units participating, and by November 2018 decreased the readmission rates on all Shock Trauma units (see graph 1).

The patient experience scores continued to outperform the top box mean into 2019, promoting the adoption of the program by the acute surgical, pediatric, and neonatology units in February 2019. For all four quarters of FY 2019, UMMC outperformed the mean benchmark score for the category "Care Transitions." (see graph 2).

Graph 1: 30-Day Readmission Rate of Shock Trauma Patients



Graph 2: UMMC Press Ganey Top Box Patient Experience Scores for "Care Transitions" Category, by calendar year quarter.



Ambulatory Services: Managing Readmissions in a High-Risk Specialty Population

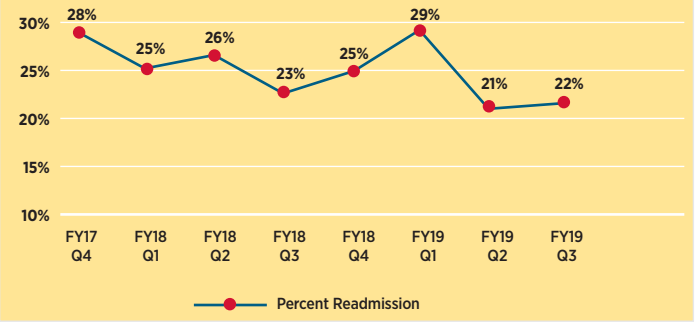
UMMC's wide range of high-risk specialty patients poses challenges to achieving continuity of care, due to the high-acuity needs (medical and psychosocial) of these patients. Coordinating the transition from inpatient care to the community setting is imperative for improving patient outcomes and reducing readmissions and costs.

In 2017, an interprofessional team led by ambulatory nursing leadership developed and implemented a comprehensive approach to manage care transitions for certain high-risk populations. To do this, select high-risk patients were electronically monitored using a health information exchange program. Care coordinators enhanced the communication among the care team by using smart phrases, care notes, and team identification in the electronic medical record. Each specialty practice developed population-specific post-discharge phone call templates to assess the patient's needs proactively, in order to prevent readmissions.

Prevention initiatives included providing patients urgent sick visit access to providers and home visits by community health workers (CHWs) to facilitate coordination of community resources. The interprofessional team discussed follow-up care at its regular meetings to monitor each patient's progress and to conduct a root cause analysis of each readmission, in order to effectively manage their patient population.

These initiatives have resulted in an overall lower 30-day readmission rate from 28% in the fourth quarter of FY 2017 to 21% in the second quarter of FY 2019 and 22% in the third quarter of FY 2019 (see graph).

Readmission Rates for Ambulatory Services High-Risk Patients



The decrease of readmissions from fourth quarter of FY 2017 to the third quarter of FY 2019, by specialty, are:

- Inflammatory Bowel Disease: 5% to 2%
- Surgical Specialties: 9% to 6%
- University Health Center (medical specialty practice): 2% to 4%
- Otolaryngology: 5% to 1%
- Neurology: 13% to 5%
- Infectious Disease: 1% to 0.5%
- Diabetes and Endocrinology: 9% to 1%

The results indicate that strategies developed and implemented by the interprofessional team are highly effective in improving transitions across the continuum of care. Next steps include expanding coordination with system-level specialty teams to streamline care pathways.

Engaging Psychiatric Occupational Therapy in Pediatric Behavioral Health

Children and adolescents who come to the Pediatric Emergency Department (ED) at UMMC with a behavioral health diagnosis are in a vulnerable and sometimes volatile state, needing compassionate and care as they await inpatient placement.

The Psychiatric Occupational Therapy (OT) team piloted services to meet the needs of these young patients. The team developed a pilot structure and routine to assist patients and families, providing for positive self-expression, enhancing coping skills, and helping to extinguish violent and aggressive behaviors that put both patients and staff at risk.

During the 13-week pilot, 147 patients received behavioral health consultation, with 43% assessed as needing inpatient admission. Of these, 78% received OT consultation consisting of individual and group therapy.

The pilot results showed a decrease in incidences of behavioral escalation and no incidents of the use of behavioral restraints. Data were obtained using UMMSafe, an online risk-reporting system based on a non-punitive model that supports open and timely communication of adverse events.

A retrospective review of UMMSafe found zero reports relating to escalating or aggressive behavior during the pilot. ED staff perception before and after the pilot resulted in 89.5% of staff reporting they feel more satisfied with behavioral health services and 73.7% of staff reporting they feel both safer and more confident in caring for this population. The collaboration of Pediatric ED, Pediatric Psychiatry, and Psychiatric OT demonstrated a positive impact on care. As a result, a full-time psychiatric OT position is planned for the Pediatric ED in Fiscal 2020.

(Left to right) Aubrey Bodt, MS, LCPAT, LCPC, Art Therapy; Mordecai Salvino, BSN, RN, SCNII, Pediatric ED; Kimberly Rodriguez, OTR-L, Psychiatric OT; and Chelsea Shock, BSN, RN, CNII, Pediatric ED

Nurses Help Design the Perfect Obstetric Unit

In October 2018, a newly designed Obstetric Care Unit opened on the sixth floor of UMMC's North Hospital building. It features 12 labor-delivery-recovery rooms, five triage rooms, five PACU rooms and three operating rooms.

From the very beginning, nursing leadership and clinical nurses were involved in the design of the unit. This began with a detailed analysis of current nursing practice and the impact of space limitations in the old unit, including how they affected patient care. As nurses on the unit provided input to the project design team, they advocated for an environment that optimized their ability to practice and enhanced their patients' safety and comfort.

Once the space was designed and building commenced, the nursing team was again able to provide suggestions for further improvements based on their clinical experience. As the project completion was nearing, it was time to plan for the move. Numerous meetings were held with the multidisciplinary team, including obstetrics and gynecology, anesthesiology, family and community medicine, neonatology, and their respective nursing teams. These teams collaborated to conduct simulations in the new space before the actual opening.

By participating in three simulations, each discipline was provided the opportunity to orient to the physical space and simulate key events that allowed staff to locate and utilize emergency equipment. The new unit features in-room neonatal resuscitation, which has supported UMMC's Baby Friendly Initiative and promotes patient satisfaction by keeping the mother and baby together as much as possible.

Most of the births at UMMC are to women in high-risk groups who are referred to UMMC's specialists in fetal medicine and related disciplines. Their choice has always been driven by the need for expertise in a specific area. Now, the new Obstetric Care Unit – thanks to nurse input in design – is one where any patients and staff would choose to have their babies.

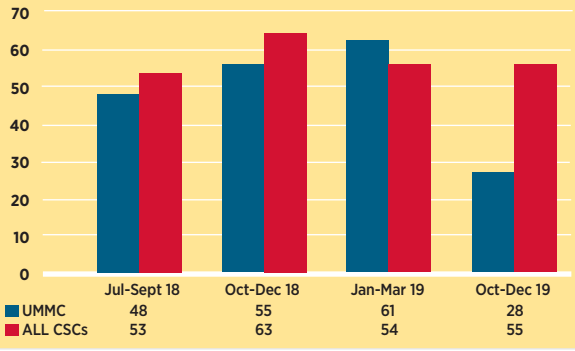
UMMC Comprehensive Stroke Center: Providing Time-Sensitive Treatments and Saving Lives

The University of Maryland Medical Center Comprehensive Stroke Center (UMMC CSC) is certified by The Joint Commission (TJC) and designated by the state of Maryland as a comprehensive stroke center. It is a tertiary center dedicated to the care of patients with complex cerebrovascular disease. At its core is the Brain Attack Team (BAT), a multispecialty team that rapidly evaluates and treats patients. The BAT members represent many specialties, including nurses, physicians, and pharmacists. They operate under guidelines to provide emergent treatment within a therapeutic window to reduce disability and mortality.

BAT members are experts in providing treatments for an ischemic stroke patient, focusing on dissolving or removing blood clots in blood vessels in the brain. For optimal outcomes, treatments need to occur as soon as symptoms occur. When a stroke patient arrives at the hospital with symptoms that occurred within the last 4.5 hours, the BAT treats them with an intravenous clot-busting medication called alteplase. For patients who arrive within 4.5-24 hours, a procedure called mechanical thrombectomy (MT) may be performed to remove the clot.

Door-to-needle time is defined as the time the patient arrives at the hospital to the time the IV alteplase infusion is started. The goal is to treat 75% of patients within 60 minutes of arrival, and 50% of patients within 45 minutes of arrival. For FY 2019, the UMMC CSC administered IV alteplase to 32 patients, with a mean door-to-groin puncture time of 52 minutes (national mean 56 minutes) (see graph 1).

Graph 1: Door-to-IV Alteplase Median Times, in Minutes, FY 2019

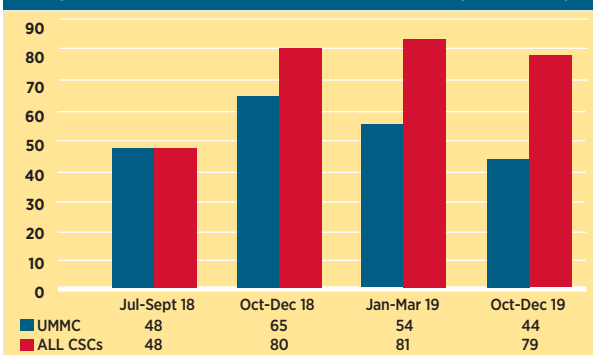


The UMMC CSC also earned the TJC/American Hospital Association's Stroke Honor Roll-Elite Plus award for consistently meeting the door-to-needle time benchmarks for the same time frame.

Door-to-arterial groin puncture time is defined as the efficiency of the BAT team to provide MT to a patient. The median goal is to achieve groin puncture within 60 minutes of the patient's arrival to the CSC. For Fiscal 2019, the UMMC CSC's median door-to-groin puncture time was 54 minutes (national comparison is median time of 80 minutes), outperforming all CSCs nationwide. (See graph 2).

The UMMC CSC is able to provide stroke care within minutes of arrival due to the skill, competence and knowledge of the stroke specialty-trained nurses working in the Emergency Department, Critical Care Resuscitation Unit, and the Neuroscience units. Nurses in these areas receive ongoing stroke education and competency updates throughout the year. The nursing staff is an integral part of the UMMC BAT, with key responsibility for rapidly triaging stroke patients. The nurses participate on performance improvement teams, research focus groups, journal clubs, and stroke operations groups. Nurses are engaged in all aspects of stroke care. Their contributions are key to facilitating acute stroke therapies within acceptable treatment windows. The result is improved patient outcomes – with decreased morbidity and door-to-groin times – for stroke patients in Maryland.

Graph 2- Door-to-Groin Puncture Median Times, in Minutes, FY 2019



Patient Safety Team Leads Unit and Hospital-Wide Initiatives

The 43 unit-based safety clinicians (UBSCs) are frontline providers who are allotted an extra eight hours per month to work on safety initiatives in their respective units.

The Unit-Based Safety Clinician (UBSC) Team comprises 43 clinicians – including nurses, a respiratory therapist, and an occupational therapist – from various units and departments at the University of Maryland Medical Center. UBSCs are frontline providers who were chosen by unit managers because of their passion for patient safety. These clinicians are allotted an extra eight hours per month to work on unit-based patient safety initiatives. The extra time is jointly funded by Lisa Rowen, DNSc, RN, CENP, FAAN, senior vice president for patient care services and chief nursing officer, and DePriest Whye, MD, JD, chief executive officer of Maryland Medicine Comprehensive Insurance Program.

The UBSCs were trained using the National Patient Safety Foundation Domains of Patient Safety. UBSCs were required to attend six didactic training sessions and complete the online Institute for Healthcare Improvement's Open School Learning modules for patient safety and quality.

The FY 2019 goals for the UBSC program were for each UBSC to create a monthly "safety flash" to communicate and educate staff on unit-based safety concerns. UBSCs were tasked with operationalizing and starting a "5-Minute Safety Huddle" every shift before patient handoff occurs, to increase situational awareness regarding the current safety concerns on the unit. Each UBSC was also asked to champion a unit-based safety project of its choosing. The UBSC Team is led by Melissa Custer, MS, RN, CCRN, patient safety coordinator, and meets on a bi-monthly basis to discuss hospital-wide safety concerns.

Redesigning Care Delivery with a Focus on Mobility

A collaboration between nursing and rehabilitation services led to the creation of a new role at UMMC – the mobility technician (MT). The MT facilitates safe and early mobilization in surgical patients. As a member of the nursing team, the MT is responsible for encouraging and increasing the mobility of patients through therapeutic walks, assisting patients during a transfer, and supporting the teaching of patients during discharge.

A partnership with Rehabilitation Services has been a key component to the success of the MT program at UMMC's downtown campus. During the orientation process, MTs shadow physical therapists (PTs) and occupational therapists (OTs) and collaborate with the safe patient handling and mobility (SPHM) specialist to learn how to safely mobilize patients and use lift equipment.

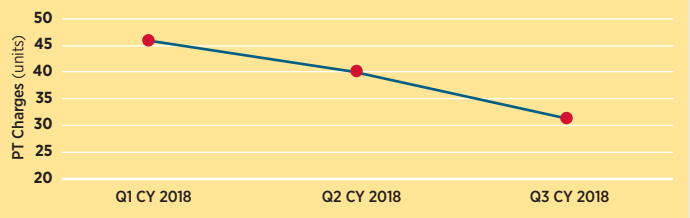
MTs also participate on the Fall Prevention Champion Committee and SPHM Taskforce in order to support best practice on the units. Currently, MTs on the Transplant IMC, Surgical IMC and Thoracic IMC units are helping to support a pilot study examining the impact of assisted toileting on preventing falls.

Since implementation, the Thoracic IMC Unit has been able to demonstrate a decrease in unnecessary PT evaluation charges, leading to an increase in PT treatment charges for patients who truly need treatments. MTs communicate with therapists on the units and can prepare patients for therapy by getting them out of bed prior to a session. In addition, MTs are able to reinforce therapy education and can assist patients in completing exercise programs prescribed by the therapist.

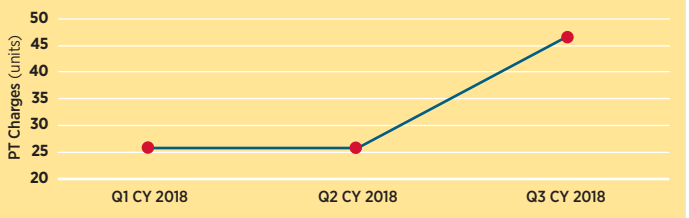
Patients surveyed reported increased satisfaction and felt that the collaboration of patient care staff to promote early mobility led to successful recovery after hospitalization.

Brady McDaniel, BS, mobility technician, with patient William Round

PT Evaluation Charges on Thoracic IMC Unit in 2018



PT Treatment Charges on Thoracic IMC Unit in 2018



NURSE RECRUITMENT AND RETENTION

Innovative mentoring programs and opportunities help UMMC attract and retain excellent nurses and expand their opportunities for advancement.

CRNA Mentorship Program

Nurses interested in applying to anesthesia programs are often required to spend time in the operating room "shadowing" a certified registered nurse anesthetist (CRNA). Since 2007, the CRNAs at UMMC have provided shadow experiences to more than 250 nurses interested in a career in anesthesia.

UMMC's Department of Nurse Anesthesia developed a more structured mentorship program in April 2018 to provide more assistance and opportunities to critical care nurses interested in a career in nurse anesthesia. Since the inception of the official mentor program, several of the participating nurses have been accepted to nurse anesthesia programs. Their mentors will continue to provide support, and hopefully many will accept a CRNA position at UMMC upon graduation.

"The CRNA shadowing program supports and helps retain critical care nurses with an interest in nurse anesthesia. Through the program, they can make informed career decisions and pursue advanced practice opportunities within the Medical Center. "

Mary Scott-Herring, DNP, CRNA, CRNA manager for clinical education and professional development

(Left to Right) Sigrid Umali, BSN, RN, CCRN, CPAN, SCNI in the PACU; Jerome Alchimowicz, BSN, RN, CCRN, CNII, of the Cardiac Surgery ICU; and Estefania Sanchez, DNP, CRNA

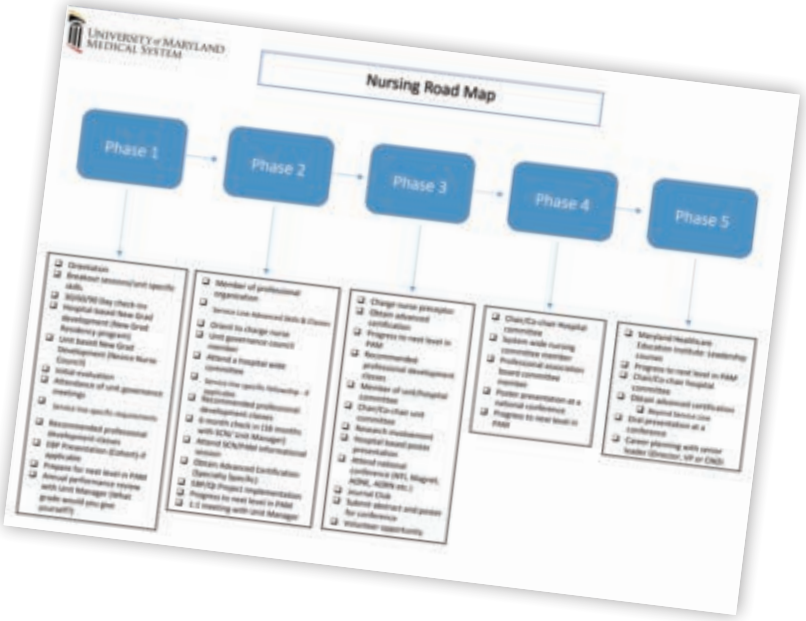
Retaining the UMMC Nursing Workforce

The Nurse Retention and Engagement Council developed a road map to help facilitate the advancement of nurses within the organization. The UMMC Nursing Road Map is a checklist of attainable milestones and opportunities present in the organization. The implementation of the Road Map included using the tool for all new nurses to the organization at their initial six-month evaluation and for all nurses with their annual evaluations.

The tool was vetted by the Staff Nurse Council, nurse managers and directors, senior leadership, and the chief nursing officer. The tool has been adapted to the ambulatory setting and for advanced practice nurses.

A total of 87% of nurse managers are actively using the Road Map with their staff; 29% agreed and 33% strongly agreed that the Road Map was beneficial in setting professional goals. Also, 23% agreed and 33% strongly agreed that they were more familiar with organizational professional development opportunities available to their staff after using the Road Map.

One unit, using the Road Map since June 2017, has shown the following outcomes: a decrease in nursing turnover from 14% to 11%, an increase in senior clinical nurse promotion from an average of one nurse per year to an average of four nurses per year, and an increase in newly advanced certified nurses from six per year in 2017 and 2018, to 11 in 2019.



Nursing Students in Ambulatory Settings

The UMMC Ambulatory Services clinical leaders and staff partnered with University of Maryland School of Nursing (UMSON) academic leaders to identify solutions that bridge the education-to-practice gap in ambulatory services. The leaders collaborated with a vision of developing a future ambulatory workforce by providing students with more experience and exposure to the ambulatory setting.

Students split their final clinical practice rotation between inpatient and outpatient departments that cared for patients with similar conditions. The ambulatory learning experience exposed students to a variety of outpatient nursing responsibilities, including outpatient surgical procedures, focused nursing assessments, inter-professional care coordination, post-hospital discharge follow-up, and transition of patients back to community-based providers.

All seven students reported in their final evaluation that they had a greater understanding of ambulatory nursing. Five of the seven reported they were interested or very interested in working in the ambulatory setting. The students completed 100 hours in inpatient settings and 80 hours in ambulatory services.

This was the first time the following ambulatory settings provided a practicum experience for entry-level nursing students: Shock Trauma Outpatient Pavilion, Coordinated Care Center, Otorhinolaryngology Clinic, Surgery Subspecialty Clinics, and the Neurology Clinic.

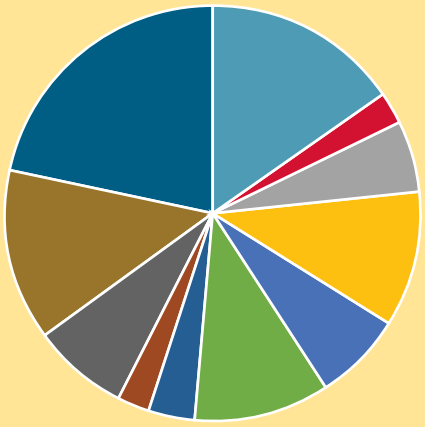
Nursing Clinical Assignments at UMMC

University of Maryland Medical Center provided entry-level nurse training to students from 10 nursing schools during FY 2019. These opportunities included clinical rotations and one-on-one practicum placements on various inpatient units, providing clinical experiences for more than 900 students. The majority of the clinical instructors (80%) are UMMC nursing staff. The pie charts outline the number of students placed at UMMC with clinical groups (six to eight students per group) or individual practicums for FY 2019.

UMMC offers a Student Nurse Externship program for BSN students for 10 weeks every summer. The students work one-on-one with a nurse preceptor, attend education classes, present a poster, and complete journals during their time here. They are placed on most of the inpatient units, including the ICUs. It is a very competitive program where more than 120 students are interviewed and 50 to 55 are selected from more than 12 different schools of nursing.

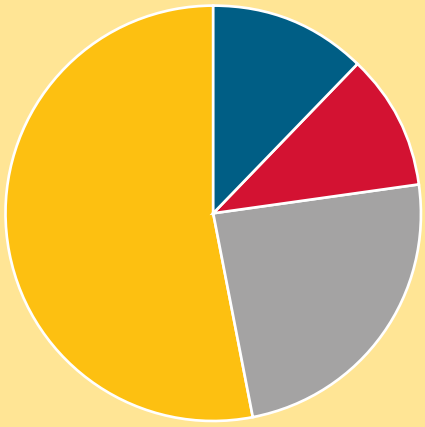
UMMC student nurse externs, June 2019

Undergraduate (AA, BSN, CNL) Practicum Student Placements | FY 2019 | n=229



- Medicine - 35
- Psych - 8
- AED - 6
- Periop - 6
- Oncology - 13
- Women's - 17
- Surgical - 24
- Peds - 31
- Neuro - 16
- Trauma - 49
- Cardiac - 24

Undergraduate (AA, BSN, CNL) Nursing Clinical Rotations | FY 2019 | n=734



- Peds - 90
- OB - 78
- Psych - 178
- Adult Health - 388

ADULT HEALTH UNITS

Medicine Telemetry 10 East
Medicine Telemetry 11 East
Medicine Telemetry 13 East/West
Vascular Surgery Progressive Care
Orthopaedic Acute Care
Surgical Acute Care
Cardiac Progressive Care
Cardiac Surgery Stepdown
Transplant IMC
Multi Trauma IMC-5
Multi Trauma IMC-6
STC Acute Care
Neuro Trauma IMC
Neuroscience Acute Care
Medical Oncology
Medical IMC

Nursing-Sensitive Quality Indicator Outcomes

UMMC Nursing continually tracks specific patient outcomes to demonstrate the positive impact of nursing care and identify opportunities for improvement. Four of these indicators include patient falls with injury, hospital-acquired pressure injuries (HAPIs), central line-associated bloodstream infections (CLABSIs), and catheter-associated urinary tract infections (CAUTIs).

These outcomes are submitted to the National Database of Nursing Quality Indicators (NDNQI) on a quarterly basis to benchmark UMMC's outcomes against those of other teaching hospitals across the country.

In FY 2019, the majority of inpatient units at UMMC's downtown campus outperformed the NDNQI teaching hospitals benchmarks for HAPIs, CLABSIs, and CAUTIs.

For patient falls with injury, 44% of inpatient units at the downtown campus were successful in outperforming the benchmarks in FY 2019 (see table). Preventing patient falls and falls with injury is a UMMC strategic priority in FY 2020. Interprofessional initiatives are planned to improve this outcome in the coming year.

FY19 Downtown Campus Nursing-Sensitive Quality Outcomes

Nursing-Sensitive Quality Indicators Inpatient Units Outperforming NDNQI Teaching Hospitals Benchmarks in FY 19		
Patient falls with injury	15/34	44%
Hospital-acquired pressure injuries	23/31	74%
Central-line blood stream infections	21/30	70%
Catheter-associated urinary tract infections	23/29	79%

Nursing Scholarly Publications and Presentations in FY 2019

PUBLICATIONS

Black, L. (2018). Lung Cancer Screening: Implementation of and Barriers to a Nurse Practitioner–Led Program. Clinical Journal of Oncology Nursing. 22(6), 601-605. doi:10.1188/18.CJON.601-605

Blosser, K.M. & Richardson, A.C. (2019). A Vaguely Symptomatic man with a Ruptured Appendix and Localized Peritonitis. Case Reports International, 8, ISSN: 2456-9100.

Howie, W.O., Broussard, M., & Batoon, B. (2019). Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA) as an Option for Uncontrolled Hemorrhagic Shock: Current Best Practices and Anesthetic Implications. AANA Journal, 87(1), 19-25.

Kishk, O.A., Simone, S., Lardieri A., Graciano, A.L., Tumulty, J., & Edwards. S. (2019). Delirium and Pharmacologic Treatment in Critically Ill Children: A Retrospective Matched Cohort Study. Journal of Pediatric Pharmacologic and Therapeutics, 24(3), 204-213.

Knippa S., Rauen, C.A., & Muller, M. (2019). Attention to Detail. CCN Certification Column. Critical Care Nurse. 39(3), 67-71.

Losonczy, L.I., Scalea, T., Menaker, J., Tran, Q., O'Connor, J., Andersen, B., DiNardo, T., Doyle, K., Stein, D., Tisherman, S., & Rubinson, L. (2018). The Critical Care Resuscitation Unit: A New Paradigm for Optimising Inter-hospital Transfer of Patients with Non-trauma Time Sensitive Critical Conditions. ICU Management & Practice, 18(1), 56-60.

McQuillan, K.A. & Schoppe, T. (2018). Preoperative and Postoperative Nursing Care of Patients Undergoing Decompressive Craniectomy. Pp. 131-179. In Aarabi B, Simard M. eds. Decompressive Craniectomy. Hauppauge, NY: Nova Science Publishers.

Muller, M., Foster, C., Lee, J., Bauer, C., Bor, C., Buck, L., Hicks, F., Day, J., Bagdure, D., Holloway, A., Chaves, A. (2019). The Utility of Guaiac Stool Testing in the Detection of Gastrointestinal Complications in Infants with Critical Congenital Heart Disease. Cardiology in the Young, 29(5), p. 655-659.

Scott-Herring, M., Mendez, A., Shay, J., McCloskey, J., & Koka, R. (2019). A Pediatric Airway Rotator Performance Improvement Initiative. AANA Journal, 7-14.

Weiner, L.A., Richardson, A.C., & Tewelde, S.Z. (2018). Spontaneous Intracranial and Lumbar Subdural Hematoma Presenting as Vaginal Pain. The Journal of Emergency Medicine, 56(4), e43-e46.

PRESENTATIONS

Ackerman, S. (2019). Improving Nurse Practitioner (NP) Care of the Crashing Patient: An Interdisciplinary Simulation Based Approach. 2019 American Academy of Emergency Nurse Practitioners (AAENP) Conference, Nashville, TN (Poster).

Bagdure, D., Foster, C., Garber, N., Holloway, A., Day, J., Lee, J., Bhutta, A., Garciano, A. (2019). Outcomes of Children with Firearm Injuries Admitted to the PICU in the United States. 48th Critical Care Congress, Society of Critical Care Medicine, San Diego, CA (Podium).

Barnaba, E. (2019). Coaching for Coaches: Effective Feedback for Professional Advancement. Association for Nursing Professional Development Annual Convention, Phoenix, AZ (Poster).

Barnaba, E. (2019). Handling a Difficult Caller in a Professional Manner. Children's National What's Trending in the Ambulatory Setting: 2019 Nurse Conference, Washington, DC (Poster).

Boord, C. (2019). A Novel Approach to Beginning Advance Care Planning Discussions. 44th Annual ONS Congress, Anaheim, CA (Poster).

Borenclark, L. (2019). Calciphylaxis Case Study. Southeastern Surgical Conference, Charlotte, NC (Poster).

Carlson, T. (2019). End the Cycle of Violence Legislation. Press Conference with Congressman Ruppersberger, Baltimore, MD (Podium).

Carlson, T. (2019). Risk Factors and Violence Intervention in Adolescents. Johns Hopkins University, Baltimore, MD (Podium).

Carlson, T. (2019). SB 981 Protective Headgear Requirement for Motorcycle Riders - Exception. Maryland Senate, Annapolis, MD (Written Testimony).

Carlson, T. (2019). SB 1040 Budget Reconciliation and Financing Act of 2019. Maryland Senate, Annapolis, MD (Oral Testimony).

Carlson, T. (2019). Searching Near and Far for Funding. Trauma Centers Association of America, Webinar.

Chant, B. (2018). Creative Approaches to Teen Driver Education. 6th Annual Distracted Driving Summit, Richmond, VA (Podium).

Chant, B. (2018). Distracted Driving: Get the Message. 2018 Powered by Me! Student Athlete Conference, Baltimore, MD (Podium).

Cheek, L. (2018). A Day in the Life of a Neuro IR Nurse. Maryland Comprehensive Stroke Conference, Baltimore, MD (Podium).

Cooper, K., Malick, L., & Sapp, J. (2019). Successful Hospital Acquired Pressure Injury (HAPI) Prevention Strategies for an Inpatient Oncology Unit. 44th Annual ONS Congress, Anaheim, CA (Podium).

Day, J. (2018). Exploring the Best Practices of Nursing Research Councils in Magnet Organizations. American Nurses Credentialing Center (ANCC) Research Symposium, Denver, CO (Panel).

Nursing Scholarly Publications and Presentations in FY 2019 (continued)

DeLuca, H. & Macatagay, R. (2018). Novel Therapies in Pediatric Hematology and Oncology. Pediatric Nursing Education Symposium, Baltimore, MD (Podium).

DiStefano, K. (2019). Implementation and Evaluation of Nurse Mentorship for the Newly Graduated Nurse. University of Maryland, Baltimore Poster Day, Baltimore, MD (Poster).

Dizon, K. (2019). A Quality Improvement Project to Implement Depression Screening in a Cardiac Surgery Specialty Practice. Medstar Nursing Evidence Based Practice & Research Conference, Washington, DC (Poster).

Dorr, P. (2019). Use of Dexmedetomidine as a Primary Sedative Agent by a Nurse Practitioner Led Sedation Team. Society for Pediatric Sedation National Conference, Aurora, CO (Poster).

Doyle, K. (2018). Workplace Violence: I Didn't Sign Up For This. JPS Health Network Annual Trauma Symposium, Ft. Worth, TX (Podium).

Doyle, K., Miller, R., Young-Walker, L., Martin, J. (2018). Leadership Panel Discussion. 7th Annual Maryland Healthcare Financial Management Association Women in Leadership Program, Baltimore, MD (Panel).

Dukes, J. (2018). Small Steps for Our Smallest Patients: An Introduction to Pediatric Palliative Care. Pediatric Nursing Education Symposium, Baltimore, MD (Podium).

Eaton, B. (2019). Advanced Practice Provider (APP) Impact on Resident Education. Southeastern Surgical Conference, Charlotte, NC (Poster).

Erickson-O'Brien, M. (2019). On-time Vaccine Implementation in the Neonatal Intensive Care Unit (NICU). Virginia Commonwealth University Conference, Richmond, VA (Podium).

Evans, D., Stevens, K., McQuillan, K., & Guinn, C. (2018). UMMC's Updated Nursing Professional Practice Model & Care Delivery System. Nursing Grand Rounds, Baltimore, MD (Podium).

Fountain, L., Connolly, M.E., & Lisbon, D. (2019). Voices of Urban Mothers: Peer Counselors and Telephone & Text Support for Breastfeeding in the Early Months. National Breastfeeding Conference and Convening, Washington, DC (Podium).

Friedrich, R. & Gulati, M. (2018). After a Safety Event: Second Victim Syndrome and Just Culture. Nursing Grand Rounds, Baltimore, MD (Podium).

Grissom, F. (2019). Educate. Engage. Empower: A Standardized Approach to Customized Patient and Family Learning. Trauma Center Association of America Annual Conference, Las Vegas, NV (Poster).

Guinn, C., Johnson, D., Levy, S., & Motley, J. (2018). Improving Patient Falls by Implementing a Falls Prevention Leadership Team. Maryland Nurses Association (MNA) 115th Convention, Baltimore, MD (Podium).

Guinn, C., Johnson, D., Levy, S., & Motley, J. (2019). Improving Patient Falls by Implementing a Falls Prevention Leadership Team. Nursing Grand Rounds, Baltimore, MD (Podium).

Hill, T. (2019). Adolescents with Chronic Kidney Disease: A Model for Transition to Adult Care. National Association of Pediatric Nurse Practitioners (NAPNAP) National Conference, New Orleans, LA (Poster).

Hill, T. (2019). Transitioning Children with Chronic Illness to Adult Care Services. Annual Dialysis Conference, Dallas, TX (Podium).

Howes, C. (2019). Epidemiology of Pediatric Botulism. 48th Critical Care Congress, Society of Critical Care Medicine, San Diego, CA (Poster).

Howie, W.O. (2018). Go-Team Lecture. Hollywood Volunteer Rescue Squad, Hollywood, MD (Podium).

Jones, K. (2019). Knowledge Translation: Bringing the Art and Science of Nursing to Life. Trends in Nursing Practice Conference, Baltimore, MD (Podium).

Jorshari, F., Somorostro, M., Bosah, B., & Ng, W. (2018). Implementation of a Mentorship Program to Promote a Supportive Work Environment. MNA 115th Convention, Baltimore, MD (Poster).

Le, B. (2019). Project Soundwave: Leveraging Ultrasound Guided IV Insertion and Gamification to Reduce CLABSI. American Association of Critical-Care Nurses (AACN) National Teaching Institute (NTI) & Critical Care Exposition, Orlando, FL (Poster).

Lowitt, N., Rowen, L., Adams, C., & Rock, P. (2019). Assessment of a Topical Coaching Workshop for Women in Medicine. Accreditation Council for Continuing Medical Education, Chicago, IL (Podium).

Lowitt, N., Rowen, L., Adams, C., & Rock, P. (2019). A Topical Coaching Workshop for Women in Medicine. Association of American Medical Colleges, Austin, TX (Podium).

Malick, L., Glenn, D., & Rutter, M. (2019). Operationalizing the CARTOX-10-Point Neurological Assessment Tool for Early Detection of Chimeric Antigen Receptor T-Cell-Related Neurotoxicity. 44th Annual ONS Congress, Anaheim, CA (Poster).

McGinn, A. (2019). Pressure Injury Prevention Bundle on a Cardiac Surgery Progressive Care Unit. Medstar Nursing Evidence Based Practice & Research Conference, Washington, DC (Poster).

McQuillan, K.A. (2018). Courageous Care. 6th Annual Susquehanna Valley Chapter of AACN Cornucopia of Knowledge for Acute and Critical Care Nurses Conference, York, PA (Podium).

McQuillan, K.A. (2018). Courageous Care by Neurotrauma Nurses. 5th All India Institute of Medical Services Annual Neurotrauma Conference, New Delhi, India (Podium).

McQuillan, K.A. (2018). Current Management of Traumatic Brain Injury. 6th Annual Susquehanna Valley Chapter of AACN Cornucopia of Knowledge for Acute and Critical Care Nurses Conference, York, PA (Podium).

McQuillan, K.A. (2018). Early Mobilization of Trauma Patients. 5th All India Institute of Medical Services Annual Neurotrauma Conference, New Delhi, India (Podium).

McQuillan, K.A. (2018). Optimal Blood Pressure for Spinal Cord Injury. Point/Counterpoint Conference, Baltimore, MD (Podium).

McQuillan, K.A. (2018). Preoperative Nursing Care of Patients Undergoing Decompressive Craniectomy. 5th All India Institute of Medical Services Annual Neurotrauma Conference, New Delhi, India (Podium).

McQuillan, K.A. (2018). Preoperative and Postoperative Nursing Care of Patients Undergoing Decompressive Craniectomy. 5th All India Institute of Medical Services Annual Neurotrauma Conference, New Delhi, India (Podium).

McQuillan, K.A. (2019). Courageous Care. Nurses Day Celebration at Hershey Medical Center, Hershey, PA (Podium).

Mirsky, C. (2019). Implementation of the CAM ICU Delirium Screening Tool. Medstar Nursing Evidence Based Practice & Research Conference, Washington, DC (Poster).

Nair, P., Johnson, K. & Tyler, R. (2018). Navigating Patient Care Coordination for Infusion Patients. MNA 115th Convention, Baltimore, MD (Podium).

Nair, P., Martin, K., DiBlasi, C. & Tyler, R. (2018). Student Nurse Transition to Practice: From the Classroom to the Ambulatory Care Environment. MNA 115th Convention, Baltimore, MD (Poster).

O'Doherty, K. & Weaver, C. (2019). Are You Informed on Consents? AACN NTI & Critical Care Exposition, Orlando, FL (Poster).

O'Malley, C., Davenport, J., & Rowen, L. (2019). Implementation of an Oncology Evaluation and Treatment Center. 44th Annual ONS Congress, Anaheim, CA (Podium).

O'Meara, L. (2019). In Search of the Roots of the Opioid Epidemic. Southeastern Surgical Conference, Charlotte, NC (Poster).

Quinamague, M. & Nair, P. (2018). Transitional Surgery Center's Journey in Sustaining a Low Surgical Oncology Readmission Rate. MNA 115th Convention, Baltimore, MD (Poster).

Raymond, G. (2018). A Primer on Substance Use Disorder. Nursing Grand Rounds, Baltimore, MD (Podium).

Rowen, L. (2019). Imagery, Images & Imagination in Healing. Nursing Grand Rounds, Baltimore, MD (Podium).

Rowen, L. (2019). Imagery, Images & Imagination in Healing. Trends in Nursing Practice Conference, Baltimore, MD (Podium).

Schroeder, L. (2019). Development and Implementation of a Mentorship for Emergency Department (ED) NPs. 2019 AAENP Conference, Nashville, TN (Poster).

Scott-Herring, M. (2018). Adventures in Pediatric Anesthesia: A Review and Case Studies. Maryland Association of Nurse Anesthetists Fall Meeting, Columbia, MD (Podium).

Scott-Herring, M. (2018). Beginning Clinical. University of Maryland School of Nursing, Nurse Anesthesia Program, Baltimore, MD (Podium).

Scott-Herring, M. (2018). Clinical Preceptor Guidelines. AANA Learn Online Education Course (Podium).

Simke, M. J., Watts, S., Tarbert, C., & Sybor Graham, R. (2018). Prioritizing the Golden Hour in Non-ICU Settings. The Children's Hospital Association's Improving Pediatric Sepsis Collaborative, Atlanta, GA (Podium).

Simone, S. (2019). Efficacy & Safety of Intermittent Intravenous Chlorpromazine to Treat Agitation in Critically Ill Children. 48th Critical Care Congress, Society of Critical Care Medicine, San Diego, CA (Podium).

Simone, S. (2019). Rethinking Sedation Practices in Critically Ill Children: When Less is More. UMMS Critical Care Education Conference, Baltimore, MD (Podium).

Stanek, G. & Day, J. (2018). Addressing Health Literacy: Nurses as Expert Teachers. ANCC Magnet Conference, Denver, CO (Poster).

Steacy, K. (2018). The Role of Proton Radiation for the Pediatric Patient. Pediatric Nursing Education Symposium, Baltimore, MD (Podium).

Taylor, S. (2019). Trauma Patients with Opioid Dependency. Critical Issues in Trauma 2019 -Suburban Hospital/Johns Hopkins, Baltimore, MD (Podium).

Tholen, R. (2019). Reducing the Risk of Alcohol Relapse after Liver Transplant. IC Addiction and Treatment Conference, Miami, FL (Poster).

Tobin, N. (2019). EGS Complications Following Gastric Bypass. Southeastern Surgical Conference, Charlotte, NC (Poster).

Trobiano, T. (2019). Case Study: Successful Cardiac and Renal Transplant in a Highly Sensitized Patient Bridged from LVAD. American Society for Artificial Internal Organs Conference, San Francisco, CA (Poster).

Tumulty, J. & Hiatt, K. (2019). Weak in the Knees: Neuromuscular Disorders in Children. AACN NTI & Critical Care Exposition, Orlando, FL (Podium).

Tyler, R. (2018). Parenteral & Enteral Support 2018: The Latest for Your Practice and Patients. National Conference for Acute Care Nurse Practitioners, Las Vegas, NV (Podium).

New Certifications Earned by Nurses During FY 2019

BMTCN – Blood and Marrow Transplant Certified Nurse

Allogeneic Stem Cell Transplant Clinic
Kristina M. Miller, BSN, RN, BMTCN

CCCTM – Certified in Care Coordination and Transition Management

Acute Care Case Management
Gail Brandt, BSN, RN, CCCTM

Neuro Ambulatory Center
Tisha Harrison, BSN, RN, CCCTM
Kimberly Willinghan, BSN, RN, CCCTM

CCRN – Critical Care Registered Nurse

Cardiac Care Unit
Rachel Bosco, BSN, RN, CCRN
Samantha Cody, RN, CCRN
Timothy Hall, MS, RN, CCRN
Kate Hanold, BSN, RN, CCRN
Stephen Rietschel, BSN, RN, CCRN
Clare Stavely, BSN, RN, CCRN
Adam Warth, BSN, BS, RN, CCRN

Cardiac Progressive Care Unit
Wesleyan Smith, BSN, RN, CCRN

Cardiac Surgery Intensive Care Unit
Courtney Ajello, BSN, RN, CCRN
Jerome Alchimowicz, BSN, RN, CCRN
Jameel Anderson, BSN, RN, CCRN
Melissa Biel, BSN, RN, CCRN
Ally Bryant, BSN, RN, CCRN
Brenda Carobini, BSN, RN, CCRN
Julie Polyniak, BSN, RN, CCRN
Paul Swift, BSN, RN, CCRN

Medical Intensive Care Unit
Cleaya Antes, BSN, RN, CCRN
Nia Bourne, BSN, RN, CCRN
Kristi Bragdon, BSN, RN, CCRN
George Burnham, BSN, RN, CCRN
Tiffany Fare, BSN, RN, CCRN
Courtney Gladstone, BSN, RN, CCRN
Christine Kantner, BSN, RN, CCRN
Emily Lighter, BSN, RN, CCRN
Bryan Robertson, BSN, RN, CCRN
Rachel Smith, BSN, RN, CCRN
Katie Todd, BSN, RN, CCRN

Maryland ExpressCare
William Shertenlieb, RN, CCRN

Multi-Trauma Critical Care
Jenna Schumacher, BS, RN, CCRN

Neuro-Trauma Critical Care
Tiffany Beaumont Coleman, BSN, RN, CCRN
Amanda Anne Miller, MSAT, RN, CCRN, TCRN

Pediatric Intensive Care Unit
Emily Brunk, BSN, RN, CCRN
Angela Orsini, BSN, RN, CCRN
Kathleen Wilmoth, BSN, RN, CCRN

Thoracic and Surgical Intermediate Care Unit
Lindsay Egbert, BSN, RN, CCRN
Christopher Walker, BSN, RN, CCRN

CCTN – Certified Clinical Transplant Nurse

Transplant IMC
Anna Cocchiaro, BSN, RN, CCTN
Elizabeth Ferguson, BSN, RN, CCTN
Christina Staines, BSN, RN, CCTN
Tracetta Short, MS, RN, CCTN
Margaret Swan, BSN, RN, CCTN

C-EFM – Certification in Electronic Fetal Monitoring

Obstetric Care Unit
Samantha Colburn, BSN, RNC-EFM

CEN – Certified Emergency Nurse

Adult Emergency Department
Jacqueline Hamil, MS, RN, CNL, CEN
Kerry Smith, BSN, RN, CEN

CMC – Cardiac Medical Certification

Pediatric Intensive Care Unit
Hannah Madej, BSN, RN, CCRN, CMC

CMSRN – Certified Medical Surgical Registered Nurse

Orthopaedic Acute Care
Matthew Johnston, BS, BSN, RN, CMSRN
Karen McNeece, BSN, BS, RN, CMSRN
Habtamu Shumuye, BSN, RN, CMSRN

Medicine Telemetry 13 East/West
Cassidy Sullivan, BSN, RN, CMSRN
Mahalakshmi Murugesan, BSN, RN, CMSRN

Vascular Surgery Progressive Care Unit
Visitacion Calingacion, BSN, RN, CMSRN
Noel Corpus, BSN, RN, CMSRN

Medical Intensive Care Unit
Eileen Girling, MS, RN, CNL

Multi-Trauma IMC-5
Gabriella Diaz, BSN, RN, TCRN, CNL

Neurosciences Critical Care
Cody Mezebish, MS, RN, CNL

Shock Trauma Acute Care
Kasey Mundell, MS, RN, CNL

CNOR – Certified in Perioperative Nursing

Cardiac Operating Room
Gary Garcia, BSN, RN, CNOR

CPHON – Certified Pediatric Hematology Oncology Nurse

Pediatric Hematology Oncology Unit
Samantha Efford, BSN, RN, CPN, CPHON

CPN – Certified Pediatric Nurse

Pediatric Gastroenterology and Nutrition
Alexandra Griffin, BSN, RN, CPN

Pediatric Progressive Care Unit
Samantha Kirk, BSN, RN, CPN
Samantha Burley, BSN, BA, RN, CPN
Julianne Dawson, BSN, RN, CPN
Brooke Kelly, BSN, RN, CPN

CSC – Cardiac Surgery Certified

Cardiac Surgery Intensive Care
Brianna Gillens, BSN, RN, CCRN-CSC
Allison Walczyk, BSN, RN, CCRN-CSC

Cardiac Surgery Stepdown
Ryan Barnes, BSN, RN, PCCN-CSC

CVN – Cardiovascular Nursing

Cardiac Electrophysiology Lab
Emerson Curley, BS, RN, RCIS, CVN

NEA-BC – Nurse Executive Advanced – Board Certified

Ambulatory Services
Julie Kubiak, MSN, RN, NEA-BC

Patient Access and Patient Flow
Simone Odwin-Jenkins, DNP, MBA, BA, RN, NEA-BC

Women's and Children's Health
Monika Bauman, MS, BSN, RN, NEA-BC

OCN – Oncology Certified Nurse

Oncology Stoler Infusion
Lisa Johnson, BSN, RN, OCN

Inpatient Oncology, N8/9W
Sarit Fleishman, BSN, RN, OCN
Kaitlyn Hegarty, BSN, RN, OCN
Abbey Parrott, BSN, RN, OCN

PCCN – Progressive Care Certified Nurse

Cardiac Surgery Stepdown
Julie Barnhouse, BSN, RN, PCCN
Lauren Graney, BSN, RN, PCCN
Elizabeth MacNaught, BSN, RN, PCCN
Dominique Mougel, BSN, RN, PCCN
Rebecca Reilly, BSN, RN, PCCN
Nick Weida, BSN, RN, PCCN
Youngmee Yoon, RN, PCCN

Medicine Telemetry 13 East/West
Annie Guan, MS, RN, PCCN

Multi-Trauma IMC-6
Hannah Clevenger, BSN, RN, PCCN
Valerie DeMateo, BSN, RN, PCCN
Kelsey Lorenz, BSN, RN, PCCN

PHM-RN – Psychiatric Mental Health Nurse

Adult Psychiatry
Maria Milarina San Pedro, BSN, RN-BC

RN-BC – ANCC Board Certified in Medical Surgical Nursing

Acute Medicine Telemetry - 11 East
Bikasha Ojha, BSN, RN-BC

Behavioral Health Clinic – UMMC Midtown Campus
Dedra Campbell, MS, RN-BC

12 East Geriatric Psychiatry
Tolulope Ige, BSN, RN-BC
Jessica Miller, BSN, RN-BC

12 West Adult Psychiatry
Abolanle Odejinmi, BSN, RN-BC
Maria San Pedro, BSN, RN-BC

SCRN – Stroke Certified Registered Nurse

Neurosciences Critical Care
Tim Kane, BSN, RN, SCRN
Kathryn Pstrak, BSN, RN, SCRN
Taghi Ryder, MS, RN, SCRN
Melissa Webber, BSN, RN, SCRN

TCRN – Trauma Certified Registered Nurse

10 East
Carl Hamilton, RN, TCRN

Multi-Trauma IMC-5
Erin Alford, BS, RN, TCRN
Heather Couillard, BS, RN, TCRN
Gabriella Diaz, BS, RN, CNL, TCRN
Cynthia Hoppler, BSN, RN, TCRN
Nicole Sedaka, MS, RN, CNL

Multi-Trauma IMC-6
Faythe Benny, RN, TCRN
Kevin Boyd, MS, RN, TCRN
Margot Carroll, BS, RN, CCRN, TCRN
Laura Casale, BS, RN, TCRN
William Libetario, BS, RN, TCRN
Rachel Moore, BSN, RN, TCRN
Danielle Ruggio, BSN, RN, TCRN
Leah Sturgis, BS, RN, TCRN

VA-BC – Vascular Access Board Certified

Pediatric Vascular Access Team
Christina Fellner, MS, RN, CCRN, VA-BC

2019 Nursing Annual Report Team
Carolyn Guinn, MSN, RN, NEA-BC
Susan Carey, MS
Maureen Archibald, MS, RN
Jenni Day, PhD, RN
Cyndy Ronald, BA
Dorhonja Nichols, MS, RN
Brian Le, MS, RN, CCRN, CNL
Cassie O'Malley, DNP, RN, OCN
Hannah Asiem, DNPc, MSN, RN
Wanda Walker-Hodges, MS, CRNA
Anne Haddad, BA
Linda Praley, BFA

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