

# Podium Abstracts

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## ADVANCED PRACTICE

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### 01 ADVANCED PRACTICE NURSE CANCER GENETICS PROGRAM INCREASES GENETIC TEST COMPLETION RATES IN BLACK VETERANS

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While there are increasing numbers of patients for whom genetic testing is recommended by the National Cancer Care Network (NCCN), there is a critical shortage of genetics services providers in the United States, and in the Department of Veterans Affairs. We hypothesized that advanced practice nurses could augment the genetic workforce within VA by addressing the genetic testing and genetic care needs of lower complexity cancer genetics referrals by being embedded within the Oncology clinic. We initiated an Advanced Practice Nurse (APRN)-facilitated cancer genetics service in the Oncology practice at the Corporal Michael Crescenz VA Medical Center (CMCVAMC). We collected data on all cancer genetics related consults to both a centralized telegenetics service and the APRN-facilitated cancer genetics service. In total, 238 Veterans were referred for genetic testing related to a personal or family cancer history; 130 to the centralized telegenetics service and 108 to the APRN-facilitated cancer genetics service. In comparison to the centralized telegenetics service, the APRN-facilitated service resulted in a significantly increased genetic testing completion rate (72% versus 30%,  $p < 0.0001$ ) and a significantly reduced loss to follow-up (7% versus 39%,  $p < 0.0001$ ). This was found overall and for patients with a personal cancer history. Stratifying by self-identified race/ethnicity (SIRE), we found no difference in genetic testing completion rate, with 25% vs 37% of SIRE-Black versus SIRE-Whites completing genetic testing via the centralized telegenetics service, respectively ( $p = 0.17$ ). In the APRN-facilitated service, 80% vs 61% of SIRE-Blacks versus SIRE-Whites completed genetic testing ( $p = 0.05$ ). Despite recent assertions that racial disparities exist in genetic testing uptake, we found high rates of genetic testing completion rate with an APRN-facilitated service regardless of self-identified race. Addition of APRN-facilitated cancer genetics services within Oncology practices will likely result in significantly improved genetic testing rates and decreased loss to follow-up for cancer genetic testing across VA.

### 02 USING A DESIGN THINKING PROCESS TO CREATE CULTURALLY TAILORED MOBILE TEXT-MESSAGES TO IMPROVE ADHERENCE TO ADJUVANT HORMONE THERAPY AMONG HISPANIC BREAST CANCER WOMEN

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Hormone receptor positive, the most common breast cancer (BCa) subtype in Hispanic women, is usually treated with primary treatments and adjuvant hormone therapy (AHT). Unfortunately, Hispanic women have a higher rate of discontinuation of AHT treatment compared with other racial/ethnic groups, which increases their risk of cancer recurrence and mortality. In fact, BCa is the leading cause of mortality in Hispanic women and the most commonly diagnosed cancer in this population. Culturally tailored mobile text-messages could improve adherence to AHT in Hispanic breast cancer women. The purpose was to create a culturally tailored mobile text-messaging intervention about AHT for Hispanic breast cancer women. This was a two-phase exploratory qualitative study. On phase one, two sets of text messages (English and Spanish) were created using data from the researchers' previous work about the experience of Hispanic women taking AHT for their treatment of BCa. On phase two, individual interviews examined the opinion of Hispanic women diagnosed with breast cancer about the text messages. Using an iterative design thinking process, the interviews provided feedback on each text message helping improve next versions of the text messages. Participants completed an investigator-developed set of demographic items and the Marin acculturation questionnaire. Data analysis occurred concurrently with data collection through constant comparison analysis to assess saturation through identifying themes. Eighteen women completed the interviews (12 English-speaking, 6 Spanish-speaking). The text message themes included Hispanic culture, motivators, education, coping skills, support, and reminders. Six iterations of English text messages and four iterations of Spanish text messages were created and improved based on participants' insights regarding language used, amount of information, cultural beliefs, and own personal experience. Interpretation of the text messages differed

importantly between English-speaking Hispanic women and Spanish-speaking Hispanic women. The design thinking approach used in this study focused on empathy to understand what was important to participants regarding taking AHT. These text messages culturally tailored to Hispanic women diagnosed with BCa are an important contribution to reduce cancer care disparities in this population by increasing their education, coping skills, and ultimately adherence to AHT.

### 03 AN INNOVATIVE ORIENTATION/ONBOARDING PROCESS

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Staffing shortages in hospital and ambulatory settings present major challenges in healthcare. This can be problematic for specialty services that require specialized training to provide quality care to a complex population. Orientation of new clinical staff, to a specialty service is a lengthy process. Implementation of cross-coverage models increases the availability of trained staff. The purpose was to develop an innovative method of rapidly educating cross-covering staff in subspecialty areas which would build staff confidence in managing medically-complex patients, while meeting quality standards required by accrediting bodies. In an NCI-Designated Cancer Center, a platform of clinical standard operating procedures (SOPs) for the cell therapy services was built as a teaching tool that offered an explanation of the medical problem, pathophysiology, risk factors, and management. A competency assessment was developed to evaluate the learned material. Successful completion, meriting achievement of continuing education credits (CEUs), required: attestation of review of 16 clinical policies, 80% exam score or higher, and online evaluation of the process. Staff cross-covering the cell therapy services were required to review these policies during orientation and annually. In addition, permanent staff could utilize the platform for updating their practice documenting education for yearly credentialing. All participants were eligible to earn (CEUs). The learning module was offered to 124 inpatient and outpatient staff. Sixty-four (52%) completed all requirements and received 8 CEUs each. In the outpatient setting, 4 of 5 full time permanent Advanced Practice Providers (APPs) met criteria. Cross-coverage included 4 APPs ( 3 Nurse Practitioner and 1 Physician As-

sistant) all of whom met the criteria. (CEUs could be used for PA Category 2 education requirements.) The majority of RNs meeting the criteria were full time inpatient staff (44). The number of staff who passed the competency exam, but did not have documentation of all SOPs reviewed was 40 (32%). Thus the overall number of staff who passed the competency exam was 104 (84%). Forty-seven (73%) respondents stated they gained clinical knowledge. This new educational modality met the goal of providing evidence-based guidelines to staff who were cross-covering and did not have experience in cell therapy. In addition, it can also support the needs of permanent staff for updating their knowledge and acquiring yearly required CEUs. The design of this platform can be extrapolated to other subspecialty services.

### 04 STANDARDIZED PALLIATIVE CARE SCREENING IN THE ONCOLOGIC INTENSIVE CARE UNIT

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Patients admitted to the oncologic Intensive Care Unit (ICU) face numerous challenges including complex comorbid conditions, symptom burden, financial strain, lengthy hospitalization, values conflicts, risk for readmission, and potential mortality despite aggressive interventions. Such difficulties can be exacerbated by underlying cancer diagnoses and complications secondary to cancer treatment. Palliative care aims to address these concerns. Although national rates of palliative care referrals have been increasing among hospitalized patients overall, the rate among ICU patients with cancer diagnoses has been decreasing in recent years. The goal of this project was to increase Advance Practice Provider (APP) identification of patients in the oncologic ICU who had the greatest potential palliative care needs, thereby increasing the percentage of this population with orders for palliative care consult. A secondary goal of this project was to increase acceptance of palliative care as a valuable intervention for oncology patients during ICU admission. With input from the APPs for a 28-bed oncologic ICU, a standardized screening tool was created to identify key palliative care needs in this patient

population. Screening criteria were derived from the Center to Advance Palliative Care's toolkit for improving palliative care in the intensive care unit. The screening tool was utilized by APPs in daily rounds for every patient, assisting in identifying palliative care needs as they developed over the course of a patient's admission. This initial implementation period occurred over four weeks. The rate of palliative care consults for patients in the oncologic ICU increased from 9.47% to 18.7% when compared to the same four-week time period one year previously. The average number of days from ICU admission to palliative care consult increased from 2.7 days during the control period to 4.6 days during the implementation. This indicates that the screening tool helped identify palliative care needs that arose later in the ICU admission when compared to pre-intervention. Palliative care has the potential to help manage many complex issues for patients in the oncologic ICU. By creating a standardized screening tool that was utilized by APPs during daily rounds, rates of palliative care consult orders doubled and palliative care needs were identified as they arose later in the ICU admission. Utilizing a collaborative process in developing the tool was key to its successful adoption and implementation.

## 05 CREATING AN INFRASTRUCTURE AND EVIDENCE BASED PATHWAY FOR APP DRIVEN BENIGN (CLASSICAL) HEMATOLOGY CLINICS

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As subspecialty fields in Oncology develop, there is an opportunity to promote top of license practice for advanced practice providers (APPs) and expand patient access by creating subspecialty APP clinics. Professional development opportunities vary for APPs and establishing an infrastructure to support APPs through independent clinics contributes to retention. At a community care delivery system, data demonstrated two thirds of referrals were benign hematology and one third were solid tumor. Average time to first appointment ranged on average, from 7 to 11 days. Regional APP schedule utilization ranged from 29.26% to 62.11% over a 6-month period. An opportunity was identified to improve APP productivity,

expand patient access and time to first appointment with creation of this infrastructure. Engagement data further supported this desire from APPs to practice at top of license. Of the 27 APPs practicing across the institute, 10 APPs expressed interest in seeing benign hematology patients. In order to facilitate these clinics, APP education modules were launched in April 2023 with both didactic pre-zoom and live case study review. These modules focused on three benign hematology referrals diagnoses (iron deficiency anemia, thrombocytopenia and hemochromatosis). Electronic medical record (EMR) Express lanes were created for each diagnosis with pre-built order sets and note templates to guide clinical practice. Partnerships were matched between APPs and a hematologist for collaboration. Out of 10 APPs interested in benign hematology, 9 APPs attended each module. The modules were open to all 27 APPs. 100% of attendees gave a confidence rating of 8 or above (out of 10) that they can change clinical practice for diagnosis and screening and 100% gave a confidence rating of 8 or above (out of 10) that they can change practice overall. Express Lanes were launched April 2023 and utilization data showed 34 navigations from mostly non-oncology clinicians. Thus indicating, express lanes may have benefit beyond the oncology sphere. Launch of APP clinics is tentative for Winter 2023 and further data will be collected on how implementation impacts patient access, time to first appointment, APP productivity and experience. Establishing this infrastructure supports top of license practice, as well as APP professional development. Leveraging a combination of didactic and live education, optimizing the EMR and matching a physician-APP partner for on demand support supports top of license practice.

## 06 INCREASING SCREENING COLONOSCOPY COMPLIANCE IN MIDDLE-AGED ADULTS

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Colon cancer is a preventable global disease that is continuing to affect the middle-aged population profoundly. Although screening colonoscopy compliance prevents colon cancer, compliance rates continue to trend downward. Current literature reveals gaps in communication efforts noting that the majority of middle-aged adults are unaware of new screening colonoscopy guidelines (American Cancer Society, 2020). At a gastroenterology clinic setting in Southeast Alabama, 30% of middle-aged adults were found

to be non-compliant with screening colonoscopy exams. The reason this is significant is because low colonoscopy compliance rates correlate with increased colon cancer rates, increased mortality rates, and increased healthcare costs. The purpose of this project is to increase screening colonoscopy compliance rates in middle-aged adults. The intervention chosen based on the research was implementing a combined phone and mail recall. The electronic health record was utilized to identify and recruit patients who were noncompliant with their screening colonoscopy exam. The sample size was 40 participants. Each participant was provided with two reminder phone calls and a reminder letter. A pre-and post-survey was used to analyze screening colonoscopy rates pre-and post-intervention and a chart audit was utilized to analyze actual completed colonoscopy rates. The project leader and research team classified the survey data as pre-and-post and used descriptive statistics in Excel for data analysis. To measure the intervention outcomes the research team calculated a percentage increase from pre-and post-survey and chart audit data. Both survey and chart audit findings revealed at least a 60% increase in screening colonoscopy compliance rates revealing that implementing a reminder recall system produced the intended results. Improving communication efforts by issuing phone and mail reminders is successful at improving screening colonoscopy compliance rates. One implication for nursing practice is that advanced practice nurses should focus on initiatives that promote awareness of colon cancer preventive services.

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## CLINICAL PRACTICE

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### 01 CULTURALLY RELEVANT EDUCATION TO ADDRESS GAPS IN KNOWLEDGE ABOUT BREAST CANCER SCREENING IN AFRICAN AMERICAN WOMEN

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Among African American (AA) women, the most commonly diagnosed cancer is breast cancer (32%), and the death rate for AA/Black women is 41% higher than for Caucasian women (Giaquinto et al., 2022). Mortality rates related to breast cancer are reduced significantly with breast cancer screening (Ntiri et al., 2022). The gaps in practice associated with culturally relevant education for AA/Black women address the lack

of knowledge and breast cancer screening rates for AA/Black women (Clayton & Tariman, 2018). Breast cancer screening for AA/Black women is addressed through reliable, relevant, and evidence-based information. AA/Black women may have the knowledge, but is it culturally relevant, and does it address issues they face daily? Through a literature search and review of resources about breast cancer screening and culturally appropriate education, this QI project discusses the impact of culturally relevant education on a group of AA/Black women related to breast cancer screening. A descriptive quantitative study was conducted on AA/Black women using a pre-survey and post-survey with seven Qualtrics-validated questions. The pre-and post-surveys were conducted in five AA/Black churches. After completing a pre-survey, the participants received printed, colorful, culturally relevant education with a discussion and question and answer session and then a post-survey by electronic device and a QR code. A total of 42 AA/Black women participated in this study. The participants were 40 years and older, English speaking and able to understand English, with the ability to use an electronic device to complete the surveys. The data provided in the pre-and post-survey showed an improvement in the knowledge gap related to breast cancer screening responses for all 7 Qualtrics validated questions about breast cancer screening. After culturally relevant education, the post-survey showed that knowledge gaps were decreased for AA/Black women related to breast cancer screening. The culturally relevant education was appealing and colorful, including statistics and information specific to AA/Black women. The AA/Black women were very receptive and engaged in the discussion sessions. The surveys were conducted in the church, and the plan is to expand the culturally relevant education in the community to barber shops, beauty shops, and community events.

### 02 THE EFFICACY & EFFICIENCY OF ONCOLOGY INFUSION NURSES TRAINED TO USE ULTRASOUND GUIDANCE FOR INTRAVENOUS ACCESS

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Efficient patient flow has been identified as a goal at our cancer center for many years due to high volumes, patient acuity, and nurse skillset. The role of the nurse to establish timely and effective vascular access is an essential component for providing anti-cancer

infusion therapy. Oncology patients often have poor or compromised vasculature, due to a variety of factors and comorbidities, making traditional intravenous access attempts difficult. Traditionally, the infusion center utilized the Vascular Access Team (VAT) for those patients needing ultrasound guided PIVs, a team responsible for all consults within the 1,048 bed, 48 clinic, and 60 operating room medical center. With nearly 25-30% of PIVs placed requiring ultrasound guidance, training infusion nurses to perform this skill has the potential to significantly improve patient flow, a benefit felt by patients, frontline staff, and nursing leadership. The goal of this project was to train oncology infusion nurses to place ultrasound guided PIVs in order to enhance chair time utilization, increase nurse skill set, and support professional development of nurses. The ultrasound PIV training program began in August 2022. After securing appropriate equipment, the nurse educator and assistant nurse manager collaborated with VAT leadership for recommendations on hands-on training, online training modules, and required competency documents. Using a train-the-trainer model and following the competency requirements, training consists of completion of an online course, followed by two hands-on training sessions with an ultrasound expert, and then supervised attempts on patients. A minimum of 10 successful supervised attempts are required, but ultimate approval of competency is determined by an ultrasound expert. Data provided from July 2022 – July 2023 reported that VAT ultrasound PIV consults were resolved in 1.22 hours. Early observations show that infusion nurses can complete this consultation within 30 minutes. Since the training inception, four infusion nurses have been fully trained to perform this skill and five nurses actively training. While data collection is ongoing related to this training program, initial observations demonstrate feasibility in training frontline infusion nurses to successfully place ultrasound-guided PIVs, enhancements in chair time utilization, and improved experiences for both patients and staff. As additional nurses are trained, it is anticipated that the infusion nurses will fully manage ultrasound guided PIV placements in this academic outpatient infusion center.

### 03

#### **SAME DAY ONCOLOGY CARE CLINIC LAUNCH**

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During first six months after a cancer diagnosis, adult patients generate a high volume of unplanned visits to emergency departments. Most common gateway to cancer-related acute care delivery is the emergency department due to lack of same-day sick visit capacity and patient reluctance to communicate symptoms to oncology team until immediate or emergent attention is needed. Hospitals may be penalized financially if patients receiving outpatient chemotherapy visit the emergency department or are admitted for potentially preventable conditions. Growing national standard for cancer centers to provide dedicated same day care for oncology patients with urgent or emergent symptoms. Currently, Triage and Same Day Clinic services are available Monday-Friday from 0800 to 1630, with limitations: access -- before or after hours, patient must go to the ED or delay care, and EDs across region are significantly impacted by record-breaking volumes; therapy time limits during current hours; lack of same day imaging services outside of ED, although 3 out of 4 oncology ED patients require imaging. The purpose was development of multi-disciplinary same day clinic dedicated to improving the quality, value and experience of cancer care; proactive, patient-centered approach to symptom management tailored to the unique needs of oncology patients outside of Emergency Department or Urgent Care. Interventions included development of multi-disciplinary Same Day Oncology Care Clinic project team; gap analysis of current oncology patient needs for same day urgent symptom management, including utilization of infusion, imaging, lab services, time of day and day of week, optimal location, required resources and measures of success. Project plan development for phased approach was as follows: Phase 1a: Monday-Friday, 0800 to 2100 with last appointment at 1900; Phase 1b: Expand to Saturday/Sunday 0800 to 1800 with last appointment at 1600; Phase 2: Expansion to other sites. Business plan development and approval by cancer services and systemwide leadership for APPLIED Same Day Oncology Care Clinic, including same day imaging services. Development of clinical decision algorithms and pathways, patient-facing communication and escalations to higher level of care if needed, in collaboration with systemwide clinical and administrative leaders. Evaluation included projected

Phase 1a launch (early 2024) with anticipated 1700+ patient volume that otherwise would have utilized Emergency Department services. Results show positive patient, family and faculty/team impact, including improved access for cancer patients, enhanced clinic flows through decrease in double and triple booking patients, and improved patient/family and faculty/team satisfaction.

#### **04 THE TIME IS RIGHT: REDUCING BARRIERS TO CINV PREVENTION AND MANAGEMENT THROUGH PROACTIVE TELENURSING FOLLOW-UP**

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Despite pharmaceutical advances to antiemetics, as well as on-going nursing research, chemotherapy-induced nausea, and vomiting (CINV) continues to afflict cancer patients receiving chemotherapy. CINV is both distressing to patients and carries the potential for costly complications resulting from dehydration and malnutrition. Telephone follow-up after initial chemotherapy has been studied as a simple, cost-effective vehicle for reducing severity of side effects, including CINV. However, to date research on telenursing follow-up after chemotherapy lacks consistency in both methods and results. Further evaluation of symptom management strategies via telephone follow-up is needed. The purpose of this project is to identify the best timing for proactive telenursing follow-up, post chemotherapy cycles one (C1D1) versus cycle two (C2D1). The goal of this intervention is to reduce barriers of effective CINV management and improve patient knowledge gap of antiemetics. This descriptive quality improvement project utilized oncology telephone triage nurses to call gastrointestinal and breast oncology patients 24-48 hours after both C1D1 and C2D1 treatment. During the calls, CINV-related barriers were assessed and knowledge of antiemetics was measured using a Modified Morisky Scale (MMS). Data collected during these phone calls was then compared to identify the impact. The average MMS score increased 23% from the C1D1 phone call to the C2D1 phone call. Of the 74 patients called (n=74), 50% of patients scores improved, 27% of scores remained neutral and 23% of scores declined.

This indicates improved knowledge between C1D1 and C2D1, proving the C1D1 phone call was effective. During the C1D1 call, 49% (n=36) of patients reported a CINV-related barrier compared to 28% (n=21) who reported a barrier during the C2D1 phone call representing a 41% decrease. Enhanced knowledge and understanding of side effect management allows patients to address their symptoms in a timely manner and minimize complications. The C1D1 phone call proved effective in identification of barriers and improved patient knowledge base. However, the C2D1 phone call showed less improvement, indicating the ideal timepoint for this educational intervention was after C1D1. Post-C1D1 phone calls could be a useful best practice for oncology nurses.

#### **05 USING A THERAPEUTIC ASSESSMENT TOOL TO PROMOTE HOLISTIC COMMUNICATION IN RN NAVIGATOR PRACTICE**

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Patients frequently report feelings of anxiety and fear of the unknown when they are contacted by a RN Navigator prior to their initial clinic visit. RN Navigators provide a general clinical assessment during their calls, however, their use of therapeutic communication at a crucial point in the continuum of care is invaluable to ensuring that patients feel supported, cared for, and seen as an individual. We identified that the RN Navigation program did not have defined metrics to support their efforts. We sought to quantify the benefit of navigation touchpoints on psychosocial aspects of patient care. The purpose was to integrate a therapeutic communication tool into the RN Navigators' intake process with the goal of holistically assessing the patients' psychosocial needs, improving pre-appointment anxiety, and enhancing perception of compassionate care during their treatment journey. RN Navigators completed a palliative care communication program in March 2023, which outlined the components of the CASH Assessment Tool (Care, Assistance, Stress, Hopes and Fears). Following this training, the RN Navigators utilized the State Trait Anxiety Inventory (STAI-5) pre- and post-intake call to evaluate the impact of initial contact with a RN Navigator on patients' anxiety. After one month, the

team implemented the CASH Assessment as a supplementary component to the intake workflow. Patients' verbal comments at the conclusion of the call were documented verbatim to provide an additional qualitative metric. RN Navigators initiated referrals to support services for concerns identified through CASH. Seventy-five intake assessments were completed from April 2023- July 2023. Mean scores on the STAIS-5 decreased from pre-to post-intervention on three measures: feeling upset (1.9-1.4), frightened (2.5-1.4), and nervous (2.23-1.52). Patients expressed appreciation and gratitude in anecdotal feedback verbalized during the call. The results of this evidence-based pilot project demonstrated that the CASH Assessment Tool is beneficial for conducting a holistic intake assessment, promoting personalized care, and strengthening rapport with patients. The findings further support the benefits of holistic communication in RN Navigator practice, and RN Navigators' subsequent contributions to anxiety relief during telehealth assessments.

## 06 NEW TECHNIQUE FOR ADMINISTRATION OF LARGE-VOLUME SUBCUTANEOUS INJECTIONS: INCREASING NURSE AND PATIENT COMFORT

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Cancer treatment via subcutaneous (SC) administration has evolved to include monoclonal antibodies combined with hyaluronidase. These SC formulations require a higher volume of the medication to be administered at a slower injection rate than traditional SC injections, so nurses are encountering new ergonomic challenges during administration which can potentially impact needle stability and patient comfort. Nurses can utilize a winged infusion set to improve the administration process (Eisenberg, 2021). The purpose of this project was to assess nursing preferences for winged infusion set use with high-volume SC injections compared to standard administration and to describe any patient-reported feedback. From February to September 2022, a pilot was conducted in a 53-room outpatient cancer treatment unit at a large United States academic medical center. After receiving education, nurses utilized a 25-gauge, 3/4-inch winged infusion set with extension tubing for administration of large-volume SC injections. Nurses were surveyed to identify preferences for device use and to provide feedback from patient reports. Of the

56 nurses staffed on the unit at the time of the pilot, 45 nurses provided feedback (80% response rate). As shown in the attached image, nurses reported significant preference for the winged infusion set (91%) compared to the standard needle (4%); the remaining 4% represents new staff who had not utilized the standard needle for comparison. When asked to rank their preference level for the winged infusion set device (1 being the lowest and 5 being the highest), 98% ranked it as a 3 or higher. Qualitative feedback was collected from nursing to assess rationale for preferences and to describe any reported patient perspectives. Common themes reported from nursing included: improved body mechanics, more stability of the needle, and easy use of device. Common themes reported by patients to nursing included: improved comfort, more stability and securement of the needle, and preferred the use of the new device. These results demonstrate increased satisfaction and improved comfort from nurses and patients with use of the winged infusion set. Use of this device was implemented as the preferred administration method for high-volume SC medications in our institution, and this practice has since expanded across other locations within the large multi-site healthcare system. Any setting where these medications are administered may benefit from implementation of this new SC administration technique.

## 07 UTILIZING MOBILE INTEGRATED HEALTHCARE TO DECREASE EMERGENCY DEPARTMENT VISITS FOR ONCOLOGY PATIENTS

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More than 50% of cancer patients who visit the emergency department (ED) will be admitted to the hospital (Handley et. al, 2018). Patients may present for treatment related symptoms such as mucositis, nausea, vomiting, fatigue, etc. The American Society of Clinical Oncology suggests some of these symptoms may require prompt care versus emergent care. Strategies to reduce unplanned acute care in the oncology population may contribute to fewer ED visits and, subsequently, fewer hospital admissions. The project's

aim was to utilize mobile integrated health care, also known as community paramedicine, to decrease ED visits for oncology patients. The program's 24 hours, 7 days a week availability allows oncology patients to be treated at home for common treatment or cancer related symptoms that, traditionally, would have warranted a trip to the ED. Due to the complexity of cancer care, oncology specific education was provided to advanced care paramedics by oncology nurses and the oncology nurse educator. The oncology clinic providers and staff were educated how to make referrals to the 24/7 program. When a patient called and reported symptoms appropriate for the program, a referral was made. The advanced care paramedics were dispatched to patients' homes, a telemedicine appointment occurred between the patient and program hospitalist, and care delivered by the paramedics. Visit outcome was documented in the medical record and visit summary provided to attending oncologist. The program's capabilities are numerous: vital sign assessment, lab testing, medication/IV fluid administration, blue tooth equipment for telemedicine, imaging, IV/port access, and more. From September 2022 to August 2023, 51 referrals were made to the mobile integrated health care program. Thirty-eight (75%) were accepted and completed. Thirty-two (84%) patients remained home and four were sent to the ED for evaluation. On average, the advanced care paramedics arrived to patients' homes in under two hours and visit length was 1 ½ hours. Most often, services included lab work, fluid resuscitation, medication, and durable medication equipment. The program has proven successful in meeting the needs of cancer patients and eliminating unnecessary trips to the ED. Enhanced promotion of its use may increase utilization by oncologists and on-call oncology fellows. Continued partnership between oncology clinics and advanced care paramedics will allow for more oncology specific training and expansion of oncology specific capabilities.

## **08 GUIDANCE FOR EMPOWERING PALLIATIVE CARE DELIVERY AT ANY STAGE OF SERIOUS ILLNESS**

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Palliative care (PC) focuses on listening to patient preferences, goals, and values during challenging disease processes, treatments, and complex decision making. Patients can benefit from PC in all stages of a life-threatening illness. Unfortunately, many providers do not understand PC and the benefits it offers throughout the disease trajectory. Education of health care students, providers, patients, and families about the introduction of PC into any phase of serious illness is important to promote overall quality of life. At a midwestern university the newly developed Phases and Transitions Model of Serious Illness (PTMSI) was integrated into a health sciences elective course to prepare health care providers for the discussion and integration of PC into their treatment plans. A faculty team, each trained in PC and cancer care, introduced the PTMSI to the students in an elective course. Students had limited experience in the care of patients with complex and serious illness. Didactic content discussing each phase and transition, including the unique characteristic of illness and treatments at that stage, were presented to the students. Components of the model were presented at each class meeting using a foundational approach. Each previous topic was reviewed prior to presenting the next phase and transition. Interactive case studies were used in class to guide students in selecting PC interventions, education, and discussion that were appropriate to the patient scenario. After completing the didactic sessions and case studies for the model components, students were able to apply their knowledge in a simulated family meeting using live actors. Faculty led debrief sessions followed each of the case studies and the simulated family meeting. Students also completed an anonymous survey to evaluate their knowledge and attitude toward PC. Caring for patients with severe illness, who are approaching end of life, or family members dealing with complex issues can be overwhelming for students and nurses alike. Nurses and other health care providers are not educated in PC, thus lack comfort and skill in the delivery of PC. The PTMSI identifies the parts and evolutions of serious illness throughout the disease trajectory and allows students and nurses to approach each phase in a unique way. The PTMSI provides a clear and practical structure to educate and empower nurses to engage in PC conversations and interventions at any stage of illness.

## **09 DEVELOPING A SEAMLESS BONE MARROW**

## **BIOPSY EXPERIENCE: THE BONE MARROW BIOPSY LIAISON**

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Over 700,000 bone biopsies are performed annually. In an outpatient setting, biopsies were not well organized, patients would show up late or not at all to their appointments, and patients and family would have a lot of anxiety and fear about not being informed and the procedure itself. The purpose of this project was to develop a Bone Marrow Biopsy Liaison role who helps streamline communication with providers, nurses and provide patient education and relief of anxiety. The new role required qualifications which included: a registered nurse who assisted with marrows for three years with a bachelor's degree. The Bone Marrow Biopsy Liaison ensured steps were implemented to maintain communication before, during, and after care as well as evaluating for performance evaluation. The Bone Marrow Liaison created a step-by-step educational handout of the procedure for patients and staff, and a smart phrase was formally written, then sent out to patients via the patient portal. Pre-procedural phone calls were completed, approximately twenty-twenty-five calls a week to assess patient's knowledge and comfort of procedure prior to the appointment. During the appointment the liaison ensured there was patient selected music, light massage, and pleasant imagery to relax the patient. An electronic survey was distributed and 16 staff replied. Also, antidotal data obtained from providers, nurses, and patients revealed better communication and enhanced patient education for patients receiving outpatient bone marrow biopsies. As a result, patients arrived on time and have fewer questions and concerns upon arrival. Logistics of the day-to-day operations were running smoother and cases were running on time. Positive feedback from patients, providers, and nursing staff has been received directly. After a patient's initial BM biopsy consultation, 65% of staff agreed/strongly agreed that patients continue to call regarding their bone marrow biopsy procedure and only 35% agreed that sedation was discussed as an option at the consultation. Many, 76%, of staff agreed/strongly agreed on the value of a pre-procedural step-by-step educational handout. A post implementation evaluation survey will be implemented to quantitatively assess nursing satisfaction. All the interventions implemented by the Bone Marrow Biopsy Liaison showed a positive impact for both providers, nursing and patients in which there was more understanding, and less anxiety as to more of an idea of what to expect.

## **010 NEED FOR REMOTE TRIAGE**

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In the post-pandemic state of nurse shortages in Florida, a need for assistance was communicated to help relieve the burden of patient facing nurses not being able to meet the immediate needs of patients. Purposes were to assist clinic staff and providers in identifying the need for remote triage support, to effectively address patient concerns and requests in a timelier manner as well as uphold nurse retention within the company. The year following the pandemic, two clinics reached out in need of assistance. It was identified that remote triage could offer support by allowing clinic nurses to focus more on the patients in the treatment room. A pilot was initiated in which remote nurses took live patient calls and managed the Nurse Triage report via the EMR to address symptom management, medication refills, medication questions, treatment questions, patient resources, telehealth nurse evals (if indicated), and reporting lab values/radiology results as directed by providers. The results show a dramatic increase in the number of triages managed by remote triage from 2022-2023 (data unavailable for 2021) as remote triage went from being active in two clinics to twenty-nine clinics. With the streamlining of the Remote Triage process and most clinics implementing Remote Triage in the second half of 2022, there continues to be a notable increase in both participating clinics and the number of triages being completed. The participation, success, and confidence in the abilities of remote triage nurses contributed to the increase in triages being shifted to remote triage from the clinics. Due to the steady growth, the need for staff was also addressed by transitioning OCM nurses after its' sundowning, hiring outside nurses, as well as retaining internal nurses that would have otherwise left the organization. With many of the nurses being retained internally, this aided in contributing to the existing challenge of nursing shortages.

## **011 ENHANCING CANCER EMERGENCY CARE: ESTABLISHING AN ONCOLOGY EMERGENCY ROOM WITHIN A TRAUMA CENTER**

**Gabriella Magarelli, MSN, ACNP-BC, AOCNP, John**

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With the rapidly growing population of oncology patients, there is a concomitant rise in their utilization of the emergency room. With this rise comes heightened involvement of healthcare providers, nurses, and specialists in providing comprehensive care to these patients. Particularly noteworthy are individuals undergoing novel therapies, such as CAR-T cell therapy, Bispecific T cell Engagers, and participation in research protocols. The intricacy of their medical conditions demands specialized care. A dedicated space within the emergency department was established exclusively for oncology patients due to their specialized care requirements. This was accompanied by the integration of dedicated oncology Advanced Practice Nurses (APNs) as an indispensable component of the care team. Within the confines of the emergency trauma center, we have identified a ten-bed unit designated as the "Oncology Emergency Room." To complement this innovation, we have recruited and trained dedicated Oncology APNs. These APNs have undergone comprehensive training in collaboration with oncology specialists, both in inpatient and outpatient settings, as well as with emergency room personnel. The role of the Oncology ER APNs encompasses the assessment and treatment of cancer patients undergoing active cancer treatment within the emergency setting. Their unique expertise is instrumental in the provision of care tailored to the needs of contemporary oncologic therapies, including the identification and management of specific oncologic emergencies (e.g., CAR-T cell therapy-associated Cytokine Release Syndrome and neurotoxicity, neutropenic fever, and tumor lysis syndrome). Furthermore, they serve as conduits for improved communication between the oncology team and the emergency medicine team. With access to pertinent treatment records, external laboratory results, and imaging studies they are able to facilitate appropriate care plans and identify clinically meaningful changes in diagnostic assessments. Our evaluation process incorporated interviews with both staff members and patients. Preliminary findings have demonstrated improvement in the quality of care delivered and an overall improved patient experience within the Oncology Emergency Room.

Given the growing number of oncology patients seeking emergency care, our study highlights the need for tailored interventions. Positive feedback from patients and healthcare staff suggests that this model can significantly enhance oncology care in emergency settings. These findings warrant a broader discussion about the evolving landscape of oncology care in the emergency department.

## **012 NON-ELECTIVE SOLID TUMOR ANTI-CANCER TREATMENT ASSESSMENT: EMPOWERING NURSES TO RAISE CLINICAL CONCERNS PRIOR TO ADMINISTRATION**

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Oncology patients are admitted to our comprehensive cancer center for a multitude of complications like organ failure, sepsis, failure to thrive, and end stage disease which can affect their ability to tolerate anti-cancer treatment. For inpatient admissions where treatment was not planned, nurses needed an objective assessment tool to capture these concerns around inappropriate administration to critically ill patients on general oncology units and in ICU settings. Nurses experience moral distress when treatment can cause more harm than benefit to the patient. The design of this intervention was based on a Quality and Safety review surrounding patient mortality following inpatient non-elective treatment. A Non-Elective Solid Tumor (NEST) Treatment Verification Process was developed to assist nursing in raising these considerations to an unbiased physician reviewer. The reviewer will determine if non-elective treatment is safe to administer to the patient with the current clinical status. The purpose of this project is to provide nursing with an objective assessment tool to identify patients who are at high risk for poor outcomes when treated while in unstable conditions. NEST assessment documentation was standardized to identify potential reasons for holding anti-cancer treatment. The NEST assessment includes evaluation of vital signs within the previous 4 hours, a performance status assessment, determining if treatment protocol parameters are met, and if there are any outstanding clinical considerations not otherwise captured (ex. Nutrition deficits, abnormal lab values, infection). Cases that require evaluation will be escalated to an impartial physician reviewer. Between

Jan-Jul 2023, the NEST nursing assessment was completed 70 times. Out of 70 cases, 34 were flagged by the NEST nursing assessment for poor performance scores, inappropriate lab values, and abnormal vital signs requiring escalation. Of the escalated cases, 28 were approved to proceed with treatment, 1 case was denied, 3 patients transitioned to hospice, and 2 patients decided to postpone treatment prior to review. The NEST assessment gives nursing the ability to escalate their concerns around treatment with supporting data and standardized documentation. While the majority of cases went forward with administration following review, 12.5% of cases were held due to the complexity of the patient's condition and concern for poor outcomes following administration. Providing nurses with this assessment tool promotes autonomy while keeping patient safety and goals of care at the center of our practice.

### 013

#### **TAKING A BITE OUT OF HOSPITAL ADMISSION DAYS USING A TEAM APPROACH TO MANAGING PATIENTS AT RISK FOR TREATMENT RELATED TOXICITIES**

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BiTE (bispecific T-cell engager) therapy is a rapidly growing option for cancer treatment. These agents are commonly associated with the risk of potentially life-threatening reactions including cytokine release syndrome (CRS) and immune effector cell-associated neurotoxicity syndrome (ICANS) and therefore are standardly administered in the inpatient setting. At this NCI-designated comprehensive cancer center, oncology leadership made a decision to pursue the outpatient setting for administration and observation due to its established outpatient model for bone marrow transplant (BMT) and CAR T-cell therapy. The purpose of this project was to form a BiTE therapy workgroup of relevant stakeholders to establish feasibility and to create guidelines for the care of these pa-

tients in an outpatient setting to ensure patient safety. The workgroup identified that patients receiving BiTE therapy that includes step-up dosing schedules would be treated in the existing BMT/CAR T outpatient clinic which is run by providers and nurses who are experienced in cellular therapy and the management of CRS and ICANS. The clinic has established rules in place regarding caregiver support and local housing requirements that ensure close proximity to the inpatient unit if needed, as well as direct admission capabilities. The workgroup determined that this patient population would follow existing policies that are in place for the cellular therapy populations including strict admission criteria to a consistent inpatient service. Providers and nurses who are assigned to this team have received training in the identification and management of CRS and ICANS. We reviewed nineteen patients who have been treated with teclistamab in the outpatient setting since January 2023. Fifteen patients were admitted at least once within the first 30 days after initiation of therapy. Thirteen of the 15 admitted patients required management of CRS and/or ICANS. Four patients were never admitted. The average day of first admission was day 7 with a two-day median length of stay. There were no grade III or IV CRS or ICANS events. Our center experience has shown that BiTE therapies may be safely administered in the outpatient setting if there are established policies and resources in place for recognition and management of CRS and ICANS. Outpatient administration decreased hospital days without increased risk of safety events, though admissions for anticipated toxicities were common. Future plans include evaluating this model for other novel BiTE therapies.

### 014

#### **NURSING CARE OF A HEMODIALYSIS PATIENT UNDERGOING CAR T-CELL THERAPY**

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Chimeric Antigen Receptor (CAR) T-Cell therapy is a treatment for hematologic malignancies. Previously, patients with end stage renal disease (ESRD) requiring hemodialysis (HD) were unable to receive CAR T-Cells due to limited data on safety and efficacy as this patient population was excluded from clinical trials. Patients were excluded due to increased risk of

toxicity from the lymphodepleting chemotherapy and CAR T-cell therapy toxicity. Our program addressed the unmet need of this population by expanding the eligibility for treating patients with CAR T-cell therapy to include patients with ESRD receiving HD. We determined the creation of nursing workflows would enable patients with ESRD receiving HD to successfully receive CAR T-cell therapy. This novel approach was created by a multidisciplinary team consisting of the Immune Effector Cellular Therapy (IEC) oncology nurse navigators (ONNs), the IEC program director and physicians, onco-nephrology, dialysis nursing and inpatient nursing. To be eligible, patients receiving HD must have social support and limited co-morbidities. Prior to CAR, patients are evaluated by an onco-nephrology team. IEC physicians created guidance for inpatient lymphodepletion chemotherapy and related dialysis start times. The ONNs disseminate a calendar with the dates and chemotherapy timing prior to a patient's admission. Chemotherapy is administered in the evening; dialysis is scheduled 12 hours after the fludarabine dose completes. On Day 0, patients receive HD in the morning and CAR T-cells are infused in the afternoon. Patients do not receive HD until Day +2. Bedside dialysis is used to ensure nursing can frequently monitor patients for toxicity. Inpatient nurses continually evaluate for CAR T-cell toxicity and work collaboratively with the multidisciplinary team to ensure patient safety. Three patients with Multiple Myeloma and ESRD receiving HD completed CAR T-cell therapy in the inpatient setting. They were safely treated, without significant CAR T-cell toxicity. After the first patient, the multidisciplinary team met to refine the workflow for ONN communication. We developed guidelines for the timeframe of communication prior to admission. Disease indications for CAR T-cell therapy continues to expand and evolve. With real-world experience in treating toxicity, we can start to address populations with an unmet need and expand treatment options. Our workflow implementations were successful because of our multidisciplinary approach and open and frequent communication between teams.

## **015 EVALUATING NORMAL SALINE LOCKING FOR SUBCUTANEOUS PORTS FOR PATIENTS ON TREATMENT AND 90-DAY MAINTENANCE FLUSHING**

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Heparin flushing is commonly used to maintain central venous catheters. However, heparin has been connected to complications, including heparin induced thrombocytopenia. Removing heparin from locking central venous catheters has been published in literature. Limited published literature was identified addressing patients who are on a 90-day maintenance flushing schedule for subcutaneous ports. After reviewing literature, heparin was removed as a locking solution for subcutaneous ports for patients on treatment and on 90-day maintenance flush schedules. A comparison of alteplase usage was monitored and compared to alteplase usage during heparin locking. The purpose of this project was to demonstrate there was not a change in alteplase usage with saline only locking of subcutaneous ports for patients who were on 90-day maintenance flushing and treatment. The team, which consisted of an infusion nurse, nurse manager, and nursing professional development practitioner, received support from the medical oncologists and cancer center leadership. Baseline alteplase usage, per monthly deaccess, was determined using data from January 2022-June 2022. Between January 2022-June 2022, devices were maintained using 500 units of heparin upon deaccess. Educational sessions were provided to nurses on pulsatile flushing and clamping sequence before normal saline only locking was implemented. During sessions, nurses were educated on the supporting literature, rationales for flushing and clamping sequences, and provided a return demonstration of flushing and clamping sequences. Alteplase usage was monitored, per deaccess, monthly from July 2022 through January 2023. Implementation data was compared to comparable pre-intervention data, January 2022 - June 2022. Monthly average percentage of alteplase usage per deaccess with heparin locking was 1.6%. Monthly average percentage of alteplase usage per deaccess with saline locking was 2%. During the months of normal saline locking only, of those who received alteplase, 1 patient was over 12 weeks since last access, 2 were last accessed between 7 and 10 weeks, and the remainder were accessed in the past month. Data demonstrated minimal variance between locking with normal saline alone compared to heparin. Removal of heparin from locking subcutaneous ports of patients on treatment and 90-day maintenance flushing did not significantly impact alteplase usage. Heparin was removed as the standard flush solution for subcutaneous ports in the system policy. Organizations should consider

removing heparin from locking subcutaneous ports, including those on a 90-day maintenance flushing schedule.

## **016 CALENDAR FOR FASTER AND MORE ACCU- RATE NURSING COVERAGE RESPONSES REGARDING TIMING OF COMPLEX CHEMO- THERAPY REGIMES**

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The objective was for nurses who are covering unfamiliar oncology clinics to increase the accuracy of advice and decrease time to respond to patients calling about timing of specific medications with their complex oral chemotherapy regimens. Oral chemotherapy regimens are becoming increasingly complex, and along with that comes questions about how and when to take the pills. At Moores Cancer Center (MCC), there are 9 specialty cancer groups. It is not uncommon for a covering nurse to be unfamiliar with the particular chemo regime the patient is undergoing. With the goal of increasing accuracy and decreasing delays in time to respond to patients questions about timing of complicated chemo, a calendar smart phrase tool has been developed. This performance improvement project utilized the PDSA approach. .Txcal was created in conjunction with input from PharmDs, MCC nurses, physicians, and Epic staff. This creates the ability to place a calendar into an after visit summary, or mychart message to patients which then has the specific chemotherapy names placed on the appropriate dates. A 10 question survey was sent to MCC nurses prior to the implementation of the .Txcal smartphrase to establish a baseline. Over the course of 3 months, educational sessions and one on one meetings were held introducing the smartphrase. A 10 question survey was immediately sent out after the educational session, as well as sent out 3 months after the education to evaluate effectiveness. As a result of the .txcal smartphrase, nurses were able to respond to questions much more quickly. Response times went from “hours and days” to “seconds and minutes”. There was a significant decrease in time taken to answer the questions of which medications should be taken on any given day; from 81 and 220 seconds pre-intervention to 15 and 21 seconds post intervention. Accuracy in advice was also increased. Prior to implementing the .txcal smartphrase, only 79% of the time the covering nurse was able to correctly advise on which date an oral chemotherapy should be stopped. After the implementation, 100% identified

correctly which date an oral chemotherapy should be stopped. The .txcal smartphrase increased accuracy of nurses covering for other teams when advising oral chemotherapy timing with patients/family members, as well as decreased the time it took to respond.

## **017 IMPROVING EDUCATIONAL DEFICITS FOR THE GYNECOLOGIC PATIENT POPULATION IN THE AMBULATORY SETTING**

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The objective was to standardize the education process and content for gynecologic oncology patients and increase nursing confidence when educating in the ambulatory setting. Educating patients on managing chemotherapy side effects in the ambulatory setting is inhibited by a lack of time, the open environment, health literacy, language barriers, and readiness to learn. Preliminary surveys reviewing current nursing practices elucidated a deficit in knowledge, time, confidence, and resources. More standardized educational practices are needed to reduce patients' anxiety and increase knowledge recall. Nurses attended a 45-minute course reviewing chemotherapy side effects, the teach-back method, and new educational resources. They also attended a 30-minute in-service focused on managing nutritional side effects and received a new education checklist. Nurses rated their confidence related to the teach-back method at one month, three months, and six months post-interventions. In addition, to ensure a quiet environment for one-on-one education, Infusion Center schedulers collaborated with the physicians' coordinators and pharmacy to schedule education for patients in a private conference room prior to their treatment day. Additional scheduling adjustments were made to allow more time between patient appointments. Six months after the implementation of all these interventions, nurses and patients repeated their respective anonymous surveys. Follow-up surveys indicated that 100% of nurses reported feeling confident when educating patients about managing chemotherapy side effects. Approximately 97% of nurses indicated the chemotherapy education checklist was a helpful tool, as well as having additional educational resources readily available. About 82.4% of nurses disclosed using the teach-back method for patient education,

simultaneously reporting an improvement in their confidence level. While the percentage of patients educated one-on-one prior to treatment day increased, nurses also reported having more time to educate patients at the chairside. Patients, in turn, stated feeling more comfortable managing their side effects at home after the new interventions were implemented. The present findings indicate that having a consistent directive when performing patient education and using a multidisciplinary approach is effective. The positive results the new interventions yielded, warrants a look at collaborating with infusion centers system wide. Despite the barriers healthcare workers experience with education, the described strategies have the potential to be adapted by other infusion centers and lead to increased nurse satisfaction, patient satisfaction, and patient health literacy.

## **018 TO USING THE IPSILATERAL ARM IN BREAST CANCER PATIENTS: A PRACTICE CHANGE**

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Current practice dictates that the ipsilateral arm (the arm on the side the procedure occurred) not be used for blood pressure (BP) measurement, blood draws, or intravenous access after mastectomy, lymph node removal, or biopsy. However, evidence of harm from medically indicated skin punctures and BP measurement is limited and from outdated studies fraught with methodological issues. Subsequent studies have found no association between blood draws or BP readings and lymphedema or cellulitis. Consequently, current practice is not evidence-based. The practice of not using the ipsilateral arm can result in inaccurate calf BP measurements, the need for foot stick orders for phlebotomy, and an increased need for tunneled central venous catheters due to the inability to place a peripheral IV or PICC line. This practice change was implemented for patients with breast cancer and lymph node involvement, removal/biopsy, or a history of mastectomy. Patients were given a grey “limb alert” band in place of the standard orange “limb restriction- do not use” band. The grey band signaled to staff that the arm could be used if the contralateral arm could not (e.g., due to PICC line, DVT, existing lymphedema, etc.). The team targeted increased availability of the ipsilateral arm by >75%, decreased number of foot stick orders by >50%, and decreased number of calf BP measurements by >50%. Additionally, we aimed to have zero incidences of lymphedema

reported by patients as potentially secondary to arm use on the unit. The Johns Hopkins Evidence-Based Practice Model was used to evaluate current evidence and then design and implement a practice change. The team piloted implementation on the inpatient hematology/oncology unit. After 8 months of implementation during the pilot, there were zero incidences of lymphedema, orders for foot sticks, and calf BP measurements following ipsilateral arm use. There were over 70 uses of “limb alert” bands. Based on the success of this project, we are recommending an institution-wide practice change and update of all patient education to improve patient understanding and optimal outcomes. Updating this practice will lead to increased patient confidence in use of their ipsilateral arm, decreased inaccurate BP measurements, increased timely placement of central lines non-contingent on Interventional Radiology Scheduling, and increased patient comfort through the avoidance of foot stick orders.

## **019 MANAGING CANCER PAIN DURING AN OPIOID EPIDEMIC**

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Oncology patients report a range experience of pain during their cancer journey, whether due to disease, treatment, or both. Poorly controlled pain affects the patient’s quality of life and can become a barrier to treatment. At an NCI designated cancer center nurses recognize the extreme difficulty obtaining opioid medications due to health insurance issues (prior authorizations, medication refusals, morphine equivalent dose (MED) limitations) and governmental policies. These barriers are complicated by a national opioid crisis. A need existed to balance concerns of addiction yet effectively address barriers to pain management with an interdisciplinary approach to best practices in oncology pain management. The purpose was to provide a model of successful oncology pain management during an ongoing opioid epidemic. Nurses worked with providers to develop effective measures in the oncology pain clinic. A standard flow was established for nursing assessments, prior to all opioid refills. Nurses access state Prescription Monitoring Program (PMP) data prior to each refill, to confirm last Rx and monitor for outside prescribers. Provider (clinical pharmacist or attending MD) frequency of visits are based on state prescribing regulations. Providers utilize an evidence-based and

validated risk assessment tool (Opioid Risk Tool or ORT) score concurrently to guide practice. Patients provide urine samples for urine drug screens regularly, based on the ORT score or state suggested frequency per established risk factors. Nurses perform analysis of remaining medication to ensure patients receive appropriate prescriptions based on current pain and function. Clinic provision of pain management spans early oncology diagnoses to late survivorship. Collaborative team support (nursing, pharmacy, and providers) is essential when managing complex oncology patients. Nurses are central to the coordination of the standard process established. Insurance issues are addressed as they arise with the complementary team approach. This workflow ensures safe prescribing and meets all state and federal recommendations for monitoring opioid use. Management of pain is essential during cancer treatment and survivorship. A robust system of patient assessment and monitoring provides safe and effective pain management to a diverse patient population. Further advocacy is needed at local and federal levels to support best policies relative to opioid management. Additional advocacy is needed to assure adequate nursing staffing resources for sustainable best practices.

## 020

### FEVER AND NEUTROPENIC PATIENTS: IMPLEMENTING A DIRECT ADMIT PROCESS

Wendy Ungard, DNP, RN, NEA-BC, Cincinnati Children's Hospital, Cincinnati, OH; Kathy Demmel, BSN, RN, MHA, Cincinnati Children's Hospital, Cincinnati, OH; Erin Sandfoss, BSN, RN, CPN, NE-BC, Cincinnati Children's Hospital, Cincinnati, OH

Prompt antibiotic administration in newly febrile pediatric neutropenic oncology patients (F&I patients) who have been discharged home has been an ongoing strategic program focus. This immune-compromised patient population is at greater risk for sepsis and associated complications. Consequently, antibiotic administration within 60 minutes of arrival has been considered a cardinal measure in the delivery of pediatric oncologic care. Over time, reliable processes for both the Emergency Room and Oncology Clinic Urgent Care (Urgent Care) were instituted. Antibiotic administration within 60 minutes of arrival was consistently above 90%. The 2019 COVID pandemic and associated Emergency Room challenges including staffing shortages and unprecedented patient volumes proved too great of a stress on the time to first antibiotic workflows and related processes. As these stressors increased, the percentage of anti-

otics administered within 60 minutes fell below the 90% threshold. Utilizing the Model for Improvement, a multi-disciplinary Hematology/Oncology team was assembled to develop, test and adopt processes that divert these F&I patients from the overcrowded Emergency Room to the Urgent Care or directly to the Inpatient (IP) Unit depending on the time and day. Phase I focused on expansion of Clinic Urgent Care hours of operation. Phase II concentrated on directly admitting these F&I after Urgent Care hours to the IP Unit. Through a series of PDSA's (Plan, Do, Study, Act) workflows were created in both settings that addressed staffing, patient triage, antibiotic procurement, arrival notification, admission, and treatment processes. 100% of patients seen in the Urgent care setting received antibiotics within 60 minutes of arrival. The Direct Admission process has been "Live" for 6 weeks. 2 patients have been diverted to the ED because of patient condition as assessed phone triage physician. We will evaluate each direct admission. Extending Urgent Care hours has been successful. While we await our first Direct Admission patient, equal success is anticipated because of the hardwired interventions and the unit's historical performance in treating bedded F&I patients. Associated antibiotic administration within 60 minutes compliance has consistently been >90%. Fever in the immune-compromised patient may signify sepsis. A process for prompt treatment is essential to implementing best practice. Consequently, support will be given to continuation of supporting these patients outside of the Emergency Room setting. Future focus will be on procuring patient/family experience and outcome related data.

## 021

### INCREASING ACCESS POINTS TO CANCER CARE THROUGH TRAVELING ONCOLOGY NURSE SERVICE

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Oncology-related injection and infusion services are typically offered at large hospitals in urban areas. Treatments are often burdensome to rural patients, as barriers related to travel, distance, parking, time, and caregiver support can prevent patients from attending their appointments. Providing convenient and more

readily available access points for anti-cancer therapy services can offer a solution to address access barriers and improve patient experience and adherence to treatment regimens. Additionally, treating patients closer to home allows patients more time to rest and recover. Close to Me (CTM) is an innovative treatment delivery service providing patients with convenient anti-cancer therapies closer to where patients live. In CTM, oncology-trained Registered Nurses (RNs) travel to affiliated community clinics focused on primary care and mental health and administer select medications to patients. Treatments were risk stratified into a tiered system with attention to length of infusion, reaction and extravasation risk, and stability (see image). Patients are continually assessed by their established hematologist/oncologist through telehealth visits prior to each treatment. Eligible patients must tolerate one cycle of their treatment at the main hospital prior to enrolling. Emergency response and other safety assessments and policies are in place as part of quality and safety protocols for patients and staff participating in CTM. CTM created eighteen alternative access points for patient-centric care within two states. For patients, CTM reduced both travel and appointment wait time with expressed patient satisfaction. Although receiving care at a different location, patients were able to maintain a relationship with their hematologist/oncologist. Infusion RNs managing and operating this service reported high levels of job satisfaction with respect to personalized patient interactions and options for alternate cancer care delivery. CTM documented an overall 99 percent adherence to treatment and zero medical emergencies. Over 100,000 drive miles have been saved. Additional outcomes are included in the attached image. CTM demonstrates that a system infrastructure aligning nursing, pharmacy, and telehealth can help ensure patients receive anti-cancer therapies. Creating alternative access point solutions beyond the traditional chemotherapy clinic offers highly reliable opportunities for all patients, regardless of where they live, to receive and stay on cancer therapies. In the coming year, CTM will be implementing an additional twenty alternative access points across the country.

## **022** **LUNG CANCER PREVENTION IN FIREFIGHTERS**

**Karen Wilson, MN, RN, CGRN, CTTS, Advent Health Parker, Parker, CO**

Cancer is an epidemic for firefighters (FF) and is the most dangerous job threat to them. The International

Association of Fire Fighters states from 2002-2019 cancer was the major cause of FF line-of-duty deaths. A ten-minute low dose computerized tomography scan of the chest can be critical in detecting lung cancer early. While lung scans aren't normally a part of care for firefighters and FF don't generally meet the requirements for an annual lung cancer screening according to the United States Preventative Services Task Force., experts say they should be. An annual firefighter lung cancer screening program was created to detect lung cancer early. November is Lung Cancer Awareness month therefore FF are offered a free low dose lung CT as a method of lung cancer prevention. To improve access, the cost of a CT scan was determined. The hospital foundation was approached for financial support, and free CT scans for firefighters was approved. To disseminate this free program a flyer was developed. The hospital's Emergency Medical Services Coordinator distributed the flyer and promoted the program to fire departments in the area. The lung nurse navigator contacted other fire fighter agencies by phone and emailed a flyer. In addition, the lung nurse navigator reached out to state level fire fighter agencies to expand access to the screening. The lung nurse navigator also requested the hospital's media coordinator to promote the program to the local media. Seventeen firefighters received the screening in 2020. In 2021, 94 FFs within the hospital catchment area were screened, findings included a suspicious nodule that required a six month follow up exam. In 2022, 98 FFs from several areas within the State of Colorado were screened. Increased interests were evidenced by exponentially increasing lung screenings and the lung nurse navigator frequently receive calls about the program and make appointments. FFs are a high-risk population but their awareness is low, and this can lead to being diagnosed with late-stage cancer. Lung screening is critical and having access to a screening program can provide firefighters with peace of mind.

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## **LEADERSHIP**

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## **01** **STARTING FROM THE ONCOLOGY NURSES' PERSPECTIVE: A NEW APPROACH TO MEASURING ONCOLOGY NURSES' PROFESSIONAL QUALITY OF LIFE**

**Rebecca Boni, PhD, MSN, RN, ACCNS-AG, OCN®, Oakland University, School of Nursing, Rochester,**

MI; Catherine Dingley, PhD, RN, FAAN, University of Nevada, Las Vegas, Las Vegas, NV; Kyle Moxley, PhD, Oakland University, Rochester, MI; Ashlyn MacIver, BSN student, Oakland University, Rochester, MI

Oncology nurses are at risk for experiencing compassion fatigue. However, oncology nurses also report feeling fulfilled by their work. Together these emotions and experiences form one's professional quality of life (PQOL). When PQOL is low, nurses quit their jobs, patient care errors increase, and health systems lose money. Hospitals try to measure and improve PQOL for nurses. However, there are significant problems with the way PQOL is currently measured and therefore it is hard to determine if efforts to improve PQOL are effective. A recent grounded theory study revealed the Theory of Oncology Nurses' Professional Quality of Life (attached) and demonstrated that oncology nurses' interview responses reflected a definition of PQOL that is not consistent with any current definitions or surveys used. This study aimed to develop a survey, the Oncology Nursing Professional Quality of Life (ON-PQOL) survey (portions attached), to measure PQOL in oncology nurses that reflects the concepts identified in the Theory of Oncology Nurses' Professional Quality of Life while following best practices for instrument design. The items were written to closely reflect the direct quotes and themes expressed by the oncology nurses interviewed for the development of the theory. The ON-PQOL initially consisted of 66 Likert-type items in four sub-categories (accepting the context of oncology nursing, bettering the world, pursuing a calling, being valued). Revisions have been made to the individual items ON-PQOL based on the feedback of six experts from around the world with expertise in oncology nursing, professional quality of life, and/or psychometrics and survey development. Experts evaluated the survey and each item for relevance, clarity, and fit. The current round of testing includes a pool of oncology nurses to evaluate the ON-PQOL for internal consistency and exploratory factor analysis. Exploratory factor analysis will help determine which survey items fit best together into sub-scales. This will be important to separate unique constructs and their relationships. It is anticipated that following factor analysis the total number of items on the survey will decrease, which will help minimize response burden. The ON-PQOL, once psychometrically tested, revised based on psychometrics, and disseminated, can help better measure PQOL in oncology nurses in the future. Accurate measurement is an important step in implementing interventions to improve PQOL

and support and maintain the oncology nursing workforce.

## 02 CREATING ADVOCACY DIALOGUE FOR HEALTH POLICY ACROSS THE CANCER CONTINUUM

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Oncology nurses deliver evidence-based clinical care with limited opportunity for dialogue on the larger population-level concerns across the cancer continuum. Topics include funding tobacco cessation initiatives, commitment for research, insurer compensation for relevant testing, and assurance of accessibility to health promotion activities. Mechanisms for comprehensive discussions between nurses, the Government & Community Relations department (GCR) staff, and legislators are essential for determination of priorities for health care funding. This collaborative sharing of information and perspective has implications on the overall wellness of populations. The purpose was to facilitate a meeting of Members of Congress staff, GCR, and nurses for dialogue on political issues to promote just and equitable health care practices and cancer prevention and access to care across all populations. The liaison from the professional organization, Oncology Nurses Society (ONS), worked with the local chapter oncology nurses and the GCR team at a single organization to brainstorm concerns across the cancer continuum to organize an event called "Walking in Nurses' Shoes". The event was a tour led by the nurses through the institution's treatment and clinical areas. Visitors participated in donning & doffing of personal protective wear, viewing of the care delivery model, urgent care triage, and clinical trials implementation areas. The "Walk" culminated in a robust discussion amongst the assembled group. The Members of Congress staff actively engaged in listening on topics of preauthorization, palliative care, accessibility, tobacco/vaping control, funding for schools of nursing and support for staff suffering post COVID-related fatigue. Nurses identified how valuable it was to voice concerns and share critical information on issues confronting accessibility and best possible support of health outcomes. The dialogue allowed preexisting silos to be identified and diminished with intentional information sharing and integration of nurses into planning for policy input and future committee membership on Washington State Cancer Plan formation team. Additionally,

sponsorship was provided for the nursing team & GCR to attend The American Cancer Society Cancer Action Network Hill Days as advocates at the state capital. A collaboration of a diverse group of legislative staff, GCR, and nurses are now engaged in ongoing discussion and exploration essential to building informed policy and inspire governmental support of best and equitable health outcomes. Professional engagement with ONS, national and local, is integral for staff nurse navigation in adopting these roles of influence.

### 03

#### **A UNIT-BASED APPROACH TO SUSTAINING PURPOSE: FACILITATING INTENTIONAL CONVERSATIONS**

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The everyday challenges of providing nursing care coupled with the evolving expectations and delivery of care have placed immense pressure on the nursing workforce. Constant flux, instability, and toxic work environments related to these changes have led to reports of moral distress and burnout. When not addressed, these factors lead to an unhealthy workforce and early departure of nurses from the profession. To address these negative effects, there are system, unit, and personal level wellness interventions. Nurses are well equipped to provide and lead wellness initiatives at all levels. Well-being efforts to support clinicians' wellness, a healthy work environment and team can improve patient outcomes per the quadruple aim of healthcare. The purpose of this project was to develop a unit-based wellness intervention and process that is approachable, feasible to provide in a team environment, and promotes individual and team well-being. The Facilitating Intentional Conversations' (FIC) two-part training provided learners guidelines on leading an intentional conversation, a team-based discussion without any formal agenda with four parts - breathing, check-in, dialogue, and check out. It also provides a list of questions to pose during the session that are framed around sustaining purpose within the participants. After completion of the FIC training, the learner is asked to facilitate an intentional conversation with a team using the planning template provided and the guidelines that outline the process. Part 2 can then be completed after the conversation is held and the learner debriefs their planning, expe-

riences, and outcomes. Both training courses provide Nursing Continued Professional Development contact hours. From its launch on November 14th to June 30, 2023, the two-part course has been completed by 501 learners and over 97% reported a gain in knowledge, skills, and confidence to lead an intentional conversation. Part 2 included a debrief that showed us that 353 learners held an intentional conversation and 339 intend to hold another. The major outcomes described included better communication amongst the team, collaboration, and ideas for a better workplace. Facilitating an intentional conversation is a viable unit-based wellness initiative that can be learned within a 1-hour course and used to strengthen a team. The conversations create a safe environment to share what is on someone's mind without the distraction of work and with other members of the team that understand.

### 04

#### **BEYOND GUEST LECTURING**

**Kaitlyn Drew, MN, RN, OCN, University of Washington Medical Center, Seattle, WA; Kathleen Shannon Dorcy, PhD, FAAN, RN, Fred Hutch Cancer Center, Seattle, WA; Leah Ngoche, DNP, MPH, ARNP-BC, NNP-BC, University of Washington School of Nursing, Seattle, WA**

Academic coursework for undergraduate, pre-licensure nursing education often is offered in didactic manner with university affiliated faculty supplemented by an occasional "guest lecturer". A top-tier university initiated an innovative program to deliver pathophysiologic, pharmacology, clinical assessment, treatment, and leading clinical science content. The program engaged clinical experts across practicing disciplines to develop modules reflecting specific clinical expertise and knowledge. Oncology expertise was enlisted from a large academic NCCN designated cancer center. The inpatient and outpatient oncology nurse educators designed a module to describe the pathophysiologic changes with neoplasia and identify genetic and epigenetic mechanisms of cell injury. The purpose was to develop innovative, comprehensive oncology content delivered by practicing oncology nurse educators to BSN students. A collaborative partnership between a BSN program at a top tier university and academic NCCN designated cancer center. Piloted a curriculum for a class of 62 undergraduate, pre-licensure nursing students. A module was created that included overview of the immune system, healthy cellular function, epigenetics, pathophysiology, disease identification, treatment methods, and comprehensive health outcomes. The

Practitioner-Teacher Model was utilized to deliver state of the science education, integration of research and clinical expertise, promotion of interdisciplinary collaboration, and building quality learning for students. Pre- and post-tests were utilized to evaluate confidence and understanding of oncology content. Analysis of the pilot data supported the effectiveness of the collaborative methodology. Pre- and post-test (n=61, out of 62) results demonstrated successful engagement in learning oncology content and related clinical assessment. Improvements in understanding of the material were seen in all content areas, including ability to identify elements of the immune system, structure and purpose of cells, and physiologic changes when cells become malignant. Bridging professional practice experts with the academic faculty of BSN programs creates a strong model of pre-licensure knowledge and skill building. Implementation of this module will be delivered Fall term and further evaluation will be conducted. It is essential to establish creative collaborative structures that will promote the highest quality of knowledge and expertise in nursing student graduates.

## **05 DOCTORAL NURSES LEADING THE CHARGE FOR GENOMICS TRANSLATION & INTEGRATION**

**Patricia Kelly, DNP, APRN, CNS, AGN-BC, AOCN, Genomics Consulting, Dallas, TX; Laurie Connors, PhD(c), DNP, FNP-BC, AGN-BC, AOCNP, FAANP, FAAN, Vanderbilt University School of Nursing/Vanderbilt Genetics Institute, Nashville, TN; Patricia Friend, PhD, APRN-CNS, AOCNS, AGN-BC, Loyola University Chicago, Maywood, IL**

Genomics has fundamentally changed oncology moving beyond hereditary disorders to biomarker testing, targeted therapies, symptom management and more. However, nurses, including oncology nurses, often lack preparation to integrate genomics within practice. Beginning at the highest level of nursing education, doctoral nursing faculty who are preparing future PhD and DNP nurse leaders are not able to integrate genomic content within curricula. Next-generation PhD and DNP nurse leaders need to demonstrate genomic literacy and incorporate genomics within doctoral nursing including academics, practice, and research. This project introduces TIGER (Translation and Integration of Genomics is Essential for Doctoral NuRses), a research educational program (R25HG011018) funded by the National Institute of Health (NIH)/National Human Genome Research Institute (NHGRI)

with aims to prepare doctoral nursing faculty to serve as genomic champions (leaders) at their academic settings. The year-long TIGER program is launched at the America Association of College of Nurses (AACN) annual doctoral education conference with a pre-conference workshop. The onsite workshop is followed by eleven online modules addressing topics critical for oncology and other specialties, e.g. genomic basics, population health genomics, pharmacogenomics, and ethical legal and social issues. Modules include self-learning activities supported by monthly webinars with genomic experts. A genomics knowledge assessment is completed pre-program and at follow-up intervals. Participants develop SMART (specific, measurable, achievable, relevant, and timely) goals for integrating genomics within curricula, scholarship, and research and share goals via online sessions. TIGER graduates become genomic leaders (train-the-trainer) at their academic and practice settings and present interventions for upcoming TIGER cohorts at the pre-AACN workshop. The TIGER educational research program is in year two with 39 participants from across the U.S. Although early in the evaluation phase, year-one participants are initiating change as evidenced by pre-conference workshop leadership roles and SMART goal evaluations. Participant comment: "This training has allowed me to better understand the opportunities for students with interest in genomics research and how to best guide them. In addition, this course allowed me to feel confident accepting a teaching assignment on genomics." TIGER addresses genomic education at the doctoral level (top down), an approach that is underrepresented in nursing and oncology education and can be reproduced. TIGER prepares genomic leaders who have unique roles to enhance genomic literacy and competencies and chart the course for genomics-informed oncology care.

## **06 CREATING AN ONCOLOGY NAVIGATION PATIENT SATISFACTION SURVEY AS A STANDARDIZED METRIC ACROSS A LARGE ACADEMIC HEALTH SYSTEM**

**Jacqueline Miller, MSN, RN OCN, Sidney Kimmel Cancer Center-Jefferson Health, Philadelphia, PA**

Measuring the impact of an oncology navigation program is challenging, but critical for sustainability. The Sidney Kimmel Cancer Center (SKCC) - Jefferson Health is part of an 18 hospital academic health system spanning two states; the largest in the Philadelphia region. Within this expansive enterprise,

35 oncology navigators support over 7,000 patients annually. To evaluate the impact of this service, the AONN+ DOMAINS for certification were referenced and patient experience/patient satisfaction survey results/month was selected as a baseline metric across the enterprise. To measure navigation's impact on the patient experience, we created a navigation patient satisfaction survey. The purpose of this project was to develop a standard metric across a large enterprise to evaluate oncology navigation's impact on the patient experience. We created a navigation patient satisfaction survey. Working with our Press Ganey team, we developed a navigation patient satisfaction survey. The patient selects the site of service and navigator that supported them then a 10 question survey opens where patients can reflect on their experience and add comments. In January, 2023, phase 1 distribution included a QR code that each navigator provided to the patients. After 100 surveys were successfully distributed and completed, we began phase 2 where all surveys are electronically distributed when a third encounter is linked to an open navigation case in the documentation system (Epic Healthy Planet). Surveys are distributed via the patient portal, email, and text message. Over 500 surveys have been completed as of 9/15/23. Positive feedback includes patients who would recommend navigation services (90%), support services met (95%), overall experience (95%). Opportunities for improvement include navigation services would have been beneficial earlier in the cancer journey (30%). Services the navigator assisted with includes coordination of services (80%), communication concerns with medical personnel (53%), counseling and support services (42%), and learning and education resources (40%). The comment section has been a wonderful mechanism to recognize navigators for the excellent care they are providing. The navigation patient satisfaction survey has provided a standard metric to gather patient feedback across our enterprise. Survey results and feedback are shared with every division's leadership team. Measuring the impact of oncology navigation on the patient experience supports sustainability and growth of our program.

## 07

### **CALIFORNIA DREAMING: ESTABLISHING A STATEWIDE ONCOLOGY ADVOCACY SUMMIT**

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**NP, AOCN, Bristol Myers Squibb, Encino, CA; Jamie Baer Mercado, BSN, RN, Sutter Auburn Infusion Center, Cameron Park, CA; Yvonne Bossert, DNP MSN-Ed RN, Bristol Myers Squibb Hematology, Princeton, NJ; Wendy Nuval Bacerra, RN, MSN, JD, AccessHope, LLC, Santa Ana, CA**

Many nurses are not involved in advocacy due to lack of knowledge, time, and confidence engaging with legislators. One of Oncology Nursing Society (ONS)'s Core Values is advocacy, aligning with their Mission to advance excellence in oncology nursing and quality cancer care. The annual "ONS Capitol Hill Days" is a two-day education and advocacy event where nurses learn about health policy and how to use their experience caring for cancer patients to help impact legislation. The purpose is expanding the scope of ONS's Mission and advocacy to the state level through the creation of an inaugural ONS California Advocacy Summit (CAS). A core group of 15 nurses from 11 California ONS chapters formed a Planning Committee. Modeled after ONS Capitol Hill Days, a didactic framework was created, including: introduction to nurse advocacy, education about California's legislative process, and meeting with respective lawmakers. Several subcommittees were developed for delegation of responsibilities related to: policy, event logistics, program speakers, registration, and meals & activities.

The two-day CAS took place in May 2023, with over 70 California oncology nurses attending. The first day focused on educating nurses new to advocacy through sessions with state legislators, patient advocates, and professional nursing organizations. The second day gave nurses the opportunity to meet with their state legislators to advocate for the Cancer Prevention Act, Ken Maddy California Cancer Registry and Biomarker Testing. Evaluations completed after the CAS confirmed the success of the event with an overall Net Promoter Score (NPS) of 93 (scored 1-100, >60 indicates high event satisfaction), indicating intended outcomes were met. The implementation of the initial subcommittees promoted a comprehensive didactic framework and fostered partnership across California ONS chapters. Limitations included: missing an opportunity to collect a pre/post knowledge and confidence assessments, difficulty with legislative scheduling process and the inclusion of a separate subcommittee that managed budgetary responsibilities. The subcommittee structure will serve as a template for future California Advocacy Summits and can be duplicated for other ONS chapters looking to establish similar events in their respective states.

## 08

### **GUESS WHO'S COMING TO CLINICALS: LEADER PERCEPTIONS ABOUT HOSTING AM- BULATORY ONCOLOGY NURSING CLINICALS**

Nicole Sennebogen, MNS, RN, OCN, Winship Cancer Institute of Emory University, Atlanta, GA; Leslie Landon, MSN, RN, NPD-BC, Winship Cancer Institute of Emory University, Atlanta, GA

The need for oncology nurses in the ambulatory setting continues to grow as nurses retire and the oncology patient population increases. However, nursing students traditionally have limited opportunities to experience ambulatory oncology during clinical rotations. The purpose was to assess the current state of clinical rotations in the ambulatory departments of a multi-site comprehensive cancer center, including leaders' perceptions of barriers to hosting students and hiring students as new graduate nurses (NGNs). During a regularly scheduled monthly leader meeting, senior nurse managers and educators from all ambulatory oncology departments were asked to complete a survey to assess the current state of clinical rotations. Leaders were asked how departments were connected with nursing students as well as the perceived barriers to hosting students and hiring them as NGNs. Leaders from 16 of 29 departments responded. 72% reported hosting students within the past year from seven schools although the majority of students were enrolled at two schools. 94% of departments received students through the centralized nursing professional development (NPD) practitioner for the healthcare system. The top four barriers to hosting nursing students were: lack of preceptors, limited bandwidth, staff burnout, and difficulty coordinating clinical experiences and onboarding new staff simultaneously. Although 72% of leaders reported multiple barriers to hosting students, three departments reported no barriers. 17% of leaders reported hiring a previous student. Interestingly one leader reported they would not consider hiring a student into a nurse resident position even if they felt they were a good fit. When asked what prevents them from hiring a student as a NGN the most common responses were that the department didn't have an open position or the student already had a job lined up. 33% of leaders also reported they need more information about the process for hiring a NGN. NPD practitioners must work with leaders to address barriers to hosting nursing students in ambulatory oncology departments as well as barriers to hiring NGNs. Best practices from one department can be used to decrease barriers in other departments. The timing and length of clinical

rotations affect leaders' ability to assess fit and recruit students to NGN positions before they commit to another job. Opportunities exist to partner with schools to improve clinical experiences and strategically adjust the timing of oncology clinicals.

## 09

### **OUR JOURNEY TO CERTIFICATION**

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The Commission on Cancer (CoC) recognizes the contributions that oncology certified nurse's make to delivering safe, evidenced based nursing care and strongly suggests that all nurses that provide direct care to oncology patients hold an oncology specific national certification. As the prevalence of novel therapies and complex cancer treatment options increase, so does the need for specialty trained oncology nurses. Studies suggest there is a connection between positive patient outcomes, operational excellence, organizational commitment, empowerment and confidence once specialty certification is achieved. The purpose of this project is to increase the number of direct care nurses that hold an oncology specific certification (OCN, BMTCN) via the development of a Journey to Certification program. Oncology leaders used process improvement principles to develop a Journey to Certification program that included updated oncology nurse job descriptions requiring specialty certification, a peer mentoring program, and recognition efforts. In addition, a series of free continuing education opportunities, certification review courses, study materials, and at the elbow support from nurse educators was developed. Nurses new to oncology begin their journey with an introduction to the foundations of oncology practice. Preparation then progresses through a series of educational and experiential learning opportunities thoughtfully planned utilizing certification test content outlines. There has been a statistically significant increase ( $p < 0.05$ ) in the average number of newly certified nurse's when comparing pre and post Journey to Certification

implementation outcomes. Nearly 70% of nurses that are eligible to test currently hold an oncology specific certification. There are nine unique oncology nursing care areas that have 80% or more of their RN's certified, with four areas achieving 100%. As the oncology nursing profession evolves to meet the expanding needs of our cancer patients, nursing leaders should consider developing pathways for specialty certification. This project demonstrated that the development of a Journey to Certification program was valuable in advancing our practice as oncology nurses, achieving CoC recommendations, and increasing the level of confidence and commitment of our oncology nurses. Further work is required to understand if there is an association between certification, patient outcomes, and operational excellence.

## 010 JOURNEY TO THE WEST: HOW ONE UNIT RAISED THE BAR TO A GROWING ONCOLOGICAL POPULATION

**Philip Tu, MBA; MSN, UCLA, Santa Monica, CA; Robert Yeranossyan, RN; MSN; PCCN; NP, UCLA Health Santa Monica 4NW, Santa Monica, CA; Tia Wheatley, DNP, RN, AOCNS, BMTCN, University of California, Los Angeles, Los Angeles, CA; Sarah Phillips, DNP, MSN-Ed., RN, RGN, UCLA Health, Santa Monica, CA**

Within our academic medical center, the need for inpatient oncology services has rapidly grown over the last 5 years. Prior to 2020, our institution had one 26-bed unit which primarily catered to solid oncology patients, while the overflow oncology patients were admitted to non-oncology medical-surgical units. Evidence suggests oncology nurses play a key role in providing specialized care for the oncology population (Cummings, 2018). Therefore, to meet the optimal care needs for the increasing patient volume, expansion of inpatient oncology services was urgently required. In 2020, an inpatient medical surgical unit with no oncology experience took on the formidable challenge of transitioning itself to a hematology-oncology unit, in an effort to provide specialized care for the hematology-oncology and chimeric antigen receptor (CAR) T-cell therapy patient population. The transition effort involving several phases:

- Planning phase: Gathering key stakeholders such as oncology providers, nursing, and support services to lay the foundation
- Relocating phase: Designing and relocating to a new 16 bed Hematology-oncology unit
- Staff development phase: Developing nursing staff

with a medical/surgical foundation to attain competency in oncology care

- Expansion phase: Expanding the service by increasing admitting capacity, developing sustainable training programs, and achieving accreditation from the Foundation for the Accreditation of Cellular Therapy (FACT)

The evaluation for this transition encompassed clinical competency of the nursing staff, staff satisfaction, financial gains, and overall trajectory of growth:

- Clinical Competency: completion of over 50 hours of transitioning training, multiple Oncology Nursing Society Poster/Podium presentations in 2021 and 2022; multiple Oncology Certified Nurse certifications in 2023
- Staff satisfaction: By adopting the shared governance leadership model, the unit achieved high staff satisfaction despite all the challenges related to the transition. The unit excelled across all seven categories and outperformed benchmarks in the Press Ganey nursing satisfaction survey in both 2020 and 2022.
- Financial gains: Revenue increase from FY21 to FY22: 12.37% (estimated \$3.09 Million)
- Growth trajectory: ADC (Average Daily Census) growth: 2.7(2020), 5.2 (2021), 10.1 (2022), and 17 (2023); FACT survey completed in July 2023, with successful accreditation

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## MANAGEMENT/STAFF EDUCATION

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### 01 IMPLEMENTING AN EVIDENCE BASED PRACTICE CHANGE: NURSE TRAINING, BUY-IN, AND HEPARIN ELIMINATION

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Following a nurse-initiated literature review at a multisite, academic comprehensive cancer center, an evidence-based practice (EBP) change to eliminate the use of heparin in implanted port care was approved. While oncology nurses continually incorporate new considerations into practice, many were wary of this practice change. Additionally, specific techniques, such as pulsatile flushing, are described in the literature as important to maintaining port patency. These techniques were in the institution's policies, but nurse awareness of the policies varied, and few nurses had received formal training on the techniques. The purpose was to promote success of the EBP change

by increasing nurse buy-in and closing knowledge and practice gaps. An interactive online module was created and distributed to all nurses. The module included: 1) summaries of recent related publications; 2) pulsatile flushing technique and rationale; 3) when to flush; 4) needleless connector functionality, with description of clamping technique and rationale; 5) recommended flush volumes with rationale; 6) application to patient education. Written explanations, visuals, and case studies were employed. Nurses completed pre- and post-surveys rating their perceptions regarding heparin use, flushing, and clamping techniques. Unit champions validated competencies with each nurse. 233 nurses completed training. Before training, 54% of nurses believed heparin was important for maintaining port patency, and 40% were concerned that patients would have an increased rate of occlusion without heparin. After training, percentages decreased to 20% and 15% respectively. Nurses' confidence in providing a rationale to patients regarding the practice change rose from 65% to 91%. After completing the module, 93% of nurses feel comfortable teaching pulsatile flushing, and 94% understand positive pressure clamping. Nurses were asked what content was most helpful to their professional practice, and comments were analyzed for trends. 35% of nurses cited evidence or rationales, and 20% of nurses found how to perform a specific technique most helpful; notably, this included many nurses who had indicated in the presurvey that they were already confident in the same technique. The interactive module was an effective way to promote EBP and distribute consistent training across the institution. These findings suggest that oncology nurses value reviewing evidence for themselves and benefit from understanding the how and why behind their practice. These insights provide valuable considerations for future EBP roll-outs.

## **02 DEVELOPING AN AIRWAY CLASS FOR A SURGICAL ONCOLOGY UNIT**

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On a surgical floor in an oncology setting, the nurses care for multiple ear, nose and throat (ENT) patients, specifically patients with new artificial airways. All nurses new to the floor state they commonly feel uncomfortable with the assessment and management of airway patients as well as have anxiety surrounding potential emergency situations. In order to best

care for these patients, nurses need to have a sound educational foundation to help them feel prepared to safely care for this unique and often challenging population. The purpose was to increase staff knowledge and confidence an airway class was developed by the nurse educator and a registered nurse. The class is 3-hours in length, broken up into both didact and simulated experience. Through discussion and lecture, topics reviewed are pathophysiology, the differences between tracheostomies and laryngectomies, emergency supplies required at bedside, as well as steps to take during an emergency. To enhance/support the didactic education, the nurses are then required to practice tracheostomy/laryngectomy care in the skills lab. Activities include suctioning, tracheostomy care and mock emergency situations. Nurses who attend the class currently give verbal feedback that the information and hands-on practice allowed them to feel more confident when caring for patients with artificial airways. A more formal evaluation is currently being made to collect concrete data as well as provide nurses the ability to anonymously deliver feedback. It is important for our nurses to feel comfortable in caring for these patients and to feel confident in their critical thinking skills. Following class discussion, nurses are able to use the information they have learned and apply it to clinical practice. While the class is specifically for nurses that are new to the floor, experienced nurses have expressed interest in attending a similar class that would refresh their skills.

## **03 BUILDING GENOMIC KNOWLEDGE THROUGH AN EDUCATION PROGRAM FOR ONCOLOGY NURSES**

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Oncology nurses act as key contributors to the biomarker testing process and collect information to inform hereditary cancer risk that leads to referrals to genomics professionals. However, a genomic knowledge deficit exists among oncology nurses. To provide this care there needs to be a basic understanding of

genomic concepts, ability to stay up to date with the evidence, and resource availability to guide practice. The purpose was to evaluate nurse attitudes, change in knowledge, and likelihood of clinical integration from attending a genomics education program. The program consists of a free, online and on-demand one-hour genomic basics course, used as pre-work for a four-hour synchronous, virtual workshop. The facilitated, live workshop provided an interactive learning environment and the opportunity to learn from four genomic nurse experts. Both the on-demand and live education used best practices for adult learners and included case studies, videos, polling, storytelling, and knowledge checks based on learning objectives. In addition, a library of additional genomic education, point-of-care tools, and patient education was introduced to seamlessly integrate what was learned into practice. A pre- and post-education survey that measured nurse attitudes, tested and perceived knowledge, and intent to change practice was offered to the program participants. Descriptive statistics and t-tests were performed to evaluate scores on the pre- and post-surveys. Cohen's d was used to measure the effect size of change in attitudes and perceived and tested knowledge. Most of the participants (N=257) were baccalaureate prepared (42%) and 87% reported no genomics content in pre-licensure education. Attitudes of nurses regarding integrating genomics into oncology were not significantly different upon pre (0.86) and post intervention (0.89) evaluation (p=0.10) but were considered already high at baseline. Tested knowledge of genomics increased post intervention from 0.58 to 0.69 (p=0.0001). Approximately, 90% reported an intent to integrate genomics into their practice. Oncology nurses play an important role in delivering genomic-informed care. A genomics education program tailored to the audience that provides adult learning opportunities has the potential to increase participant's genomic knowledge and inform intent to change practice. The genomics library of resources with genomic education and clinical practice tools that was utilized during the effective genomics education program is readily available to program participants and all oncology nurses.

#### 04 QOPI HIGHLIGHTS: UTILIZING A MULTI-ENGAGING EDUCATION APPROACH TO ALIGN WORKFLOWS AROUND QOPI STANDARDS FOR FRONT LINE NURSES

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Quality Oncology Practice Initiative (QOPI®) education required for nine outpatient offices who are now under one practice. The goal of the project is to align and standardize workflows around the 22 QOPI standards and support the effectiveness of policies and procedures. With a multi-engaging approach (visual, auditory, discussion, questions for reflection), the goal is that every nurse will appreciate and learn from at least one of these approaches. The purpose was to develop a comprehensive, multi engaging education plan to highlight each 22 QOPI standards individually, understand the specific measure and workflow, understand the intent behind the measure and how the practice meets each standard. A multi engaging education approach was developed including a weekly email with a video link and applicable tip sheets covering that week's standard. The initiative ran 12 weeks from January 2023 through April 2023 and then repeated in Summer 2023.

Weekly emails entitled "QOPI Highlights" distributed to leaders every Monday with the intent to:

- Highlight an individual QOPI standard(s).
- Understand the specific measure and workflow.
- Understand the measure intent.
- Understand how we meet each standard.

The leaders disseminated and facilitated use of the media and materials as follows:

- Forward the weekly email to all team members.
- Team members view the weekly video content and attached tip sheets.
- Take 3-5 minutes at each daily huddle to review the content.
- Watching the weekly video together in huddle (3 to 4 minutes).
- Print the tip sheets and start a folder for all nurses to view the material as needed.
- Utilize the "Questions for Reflection" during huddle to verify that nurses are taking in the information effectively.

Evaluation consisted of:

- Quarterly QOPI audits examples: Oral Chemotherapy- start date documentation improvement: 59% Q1, 76% Q2; Functional status and/or performance status at each clinic visit improvement. Q1 90%, Q2 96%.
- Tracer visits on site to obtain retention of materials.
- Confidence of teammates.

Creating a comprehensive multi engaging education project has allowed nurses to understand the 22 QOPI standards, understand the specific measure or standard, understand the intent of the measure and how

our practice meets each standard. Educator and front-line nurse will present the initiative and the impact on utilizing this type of education to nurses.

## **05 APPLYING EVIDENCE-BASED PRACTICE: STAFF EDUCATION TO IMPROVE ONCOFERTILITY KNOWLEDGE**

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Survival statistics continue to improve for adolescents and young adults (AYAs) with cancer, with estimated five-year survival rates over 85% in 2022. Multimodal cancer treatments potentially threaten fertility, and AYAs identify reproductive health concerns as an unmet need and source of distress in survivorship. Clinical practice guidelines recommend all members of the healthcare team, including nurses, offer patients counseling about cancer treatment-related infertility risk and fertility preservation options, but oncology nurses often avoid these conversations, citing a lack of knowledge and comfort. Intervention programs, such as Enriching Communication Skills for Health Professionals in Oncofertility (ECHO) and others, demonstrated the effectiveness of web-based oncofertility education and experiential learning to improve oncology health professionals' knowledge and communication skills discussing cancer and reproductive health. Using proven strategies, this evidence-based practice (EBP) project aimed to improve oncology nurse knowledge about cancer treatment-related infertility risk and fertility preservation, with a secondary aim to improve comfort discussing this topic with AYAs. The Johns Hopkins EBP Model guided this project and generated the PICO question: In adult and pediatric oncology nurses, does web-based oncofertility education combined with opportunities for role play, improve knowledge, comfort, and frequency of fertility preservation conversations compared to usual onboarding processes? An interprofessional team with AYA and oncofertility expertise synthesized a literature review and created a web-based educational module for oncology nurses to complete via the organization's learning management network. This included a one-hour, narrated PowerPoint presentation based on ECHO content, with pre and post surveys to assess knowledge, frequency of fertility conversations, and perceived

comfort and confidence. The team also distributed a fertility preservation resource infographic to support conversations. 108 Oncology nurses completed the intervention, with forty-seven percent of respondents reporting greater than 10 years nursing experience. Eighty-six percent of respondents identified lack of knowledge as the primary barrier to fertility preservation referral. Surveys revealed improvements in all objective knowledge assessments and all Likert scale items assessing perceived knowledge, comfort, and confidence. Web-based education represents a successful strategy for improving oncofertility knowledge, comfort, and confidence in oncology nurses. The project team intends to offer role play opportunities to assess additional improvements in comfort and confidence. Project implications include professional growth and satisfaction for oncology nurses, improved frequency and quality of fertility preservation conversations, and improved experiences for cancer survivors.

## **06 CHEMOTHERAPY ESCAPE ROOM - ENHANCING ANNUAL COMPETENCY ENGAGEMENT**

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Escape rooms have gained popularity in recent years as an engaging approach to nursing education and have demonstrated efficacy in new graduate nurse residencies, sepsis education, and critical care competencies. This project sought to adapt this evidence to oncology nurse chemotherapy competencies. On a 36-bed inpatient Medical/Surgical Oncology unit, nurses administer a variety of chemotherapy and immunotherapy treatments. Nurses must be able to apply knowledge from the chemotherapy administration policy to their practice when administering these agents to ensure patient safety. The purpose of this project was to evaluate an escape room as an engaging learning activity during the annual chemotherapy competency class. The project sought to determine the effectiveness of an escape room as a method to apply concepts and knowledge of chemotherapy administration policies and procedures to oncology nurses' practice. The escape room took place in the hospital's simulation lab during annual chemotherapy competencies. Nurses were divided into groups of 4-5. The teams were given a background scenario and told that they would "escape," or complete the activity, when the patient could safely receive his chemotherapy. The puzzles in the escape room required the nurses to work together

and apply concepts from the chemotherapy administration policy, including:

- Chemotherapy order review
- Recalculating chemotherapy doses
- Calculating drip rates
- Identifying correct pre-medications
- Verifying consent, and
- Implementing hazardous drug precautions

In addition to finding objects hidden in the room, the puzzles also involved:

- QR codes nurses scanned to receive clues,
- Black light to reveal invisible ink, and
- Cryptographs to prompt the next clue.

A total of 26 nurses participated in the escape room and 20 nurses completed the post evaluation.

- 80 percent of nurses “Agreed” or “Strongly Agreed” that the escape room required them to apply knowledge from chemotherapy policies and procedures.
- 80 percent of nurses “Agreed” or “Strongly Agreed” that the escape room was an engaging way to review policies and procedures.

This escape room was found to be an effective way for oncology nurses to apply their knowledge of chemotherapy administration policies and procedures. The nurses appreciated the creative activity, enjoyed building teamwork with their colleagues, and were more engaged in the competency class. An escape room can be adapted to a variety of specialties, including oncology nursing.

## 07

### MEANINGFUL LEARNING: ENGAGING NURSES IN AN “INTRODUCTION TO CHEMOTHERAPY/ IMMUNOTHERAPY” COURSE USING THE FLIPPED CLASSROOM APPROACH

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At a cancer institute in the Northeastern US, Registered Nurses (RNs) are required to take the ONS/ONCC Chemotherapy Immunotherapy Certificate Course within six months to a year of hire. To support nurses in understanding the ONS course material,

passing the course exam, and bridging the knowledge gap nurses new to oncology have, an “Introduction to Chemotherapy” course was provided. This eight-hour didactic course covered educational material necessary for both knowledge and practice. However, nurses found the information overwhelming and desired a more interactive approach. A course was developed to create education for registered nurses new to oncology that will enhance knowledge through didactic content and simulation exercises. The goal is for individuals to obtain hands-on experience with actual patient scenarios such as extravasation, administration of Vinca alkaloids, anaphylactic/hypersensitivity reactions, and handling a hazardous drug spill, all in a safe learning environment. Previous course evaluations were reviewed, determining the need for the change. The nursing service educator developed weekly meetings with the Clinical Nurse Specialist (CNS) and Nurse Educators (NE). The group completed a critical appraisal of the current content and cross-walked the ONS Chemotherapy and Immunotherapy Guidelines and Recommendations for Practice to streamline all content. Instead of the eight-hour in-person class, an asynchronous didactic learning curriculum on Padlet was created; students complete this required pre-learning before attending the newly developed simulation session. The simulation session is six hours long, with four stations students rotate through for skills practice. Following completion of each skills station, nurses participate in debriefing with the instructors to discuss the skills reviewed, lessons learned, and recommendations for improvement. When the course is complete, the nurses are sent a confidential evaluation link for Continuing Education Credit. The CNS and NE group meet and revise the course based on evaluation themes and recommendations. New approaches to learning include such instructional designs as the flipped classroom learning experience, simulation, debriefing, asynchronous learning, and evaluation. When instructing nurses new to oncology, educators will use a mix of these pedagogical methods, enhancing the learning experience. Nurses will become more responsible for learning and applying their knowledge and skills. It is well known that lecture-based education is outdated, and nurses cannot retain the information. The new learning approach will help nurses better understand oncology and the unique skills required.

## 08

### ENGAGING NURSES IN PROFESSIONAL DEVELOPMENT: IMPLEMENTATION OF

## CLINICAL SKILLS PRACTICE STATIONS IN AN OUTPATIENT ONCOLOGY INFUSION CENTER

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Ambulatory Oncology care is rapidly evolving. Increasing patient acuity, volume, treatment complexities, and nurse workload prompts creativity in the delivery of nurse education. Historically, nursing education had been primarily provided through e-learning. As clinical educational gaps became increasingly identified, the leadership team discussed ideas for educational interventions, including micro-education during morning huddles versus one-hour skills sessions. After trialing education during morning huddles, the decision was made to pivot to the skills sessions, as the huddles seemed to be overwhelming staff at the start of their shift. Providing a scheduled opportunity for nurses to practice their skills assists the leadership team in closing knowledge gaps for nurses with diverse clinical backgrounds. Involving nurses in educational teaching opportunities improves engagement, clinical practice and promotes professional development. Nurses appreciate receiving clinically meaningful information from peers in a psychologically safe small group setting. Experienced infusion nurses are incorporated into the planning and education process, including identifying skills that needed to be addressed. Frequent tasks such as Implanted Vascular Access Device access and central line care, as well as high risk, low frequency skills such as chemotherapy spills and extravasation management are examples. The infusion center schedule is blocked in advance for skill practice and three separate skill practice stations are set up with needed equipment. Nurses are divided into three small groups and participate at each station for eighteen minutes until all stations are completed. At each station, Nurse experts review related policies and procedural checklists, then nurses practice the skill with expert oversight and feedback. After the first training, the response from nurses was positive. Allotting time to review practice and policy on routinely used skills and enhancing proficiency on atypical events is a satisfier. The frequency of the training has been increased to quarterly. This allows for purposefully planned education and the inclusion of just-in-time training for identified high pri-

ority needs. Nurses report satisfaction and increased confidence and competence. Experienced staff who provide instruction report increased confidence and camaraderie with colleagues. Overall, staff are more engaged in education and the learning process than before. Since the demands of outpatient infusion centers will likely continue to increase with changes in healthcare delivery, engagement of nurses in education and teaching is an exciting way to address learning needs.

## 09 BACK TO BASICS: UTILIZING HUDDLES TO EMPHASIZE STANDARD CARE AND MAINTENANCE OF CENTRAL VENOUS CATHETERS IN AN EFFORT TO REDUCE CLABSI.

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Central Venous Catheters are commonly used to facilitate the treatment of oncology patients. Unfortunately, infections associated with these catheters can increase health care costs and significantly decrease the patient's quality of life. Research has shown that central line associated blood stream infections (CLABSI) are preventable through strict adherence to proper technique during care of these lines. Reducing CLABSI rates on an inpatient malignant hematology unit has been a key priority at our comprehensive cancer center. While policies exist for central line care and maintenance, education to front line staff was varied and inconsistent. The purpose of this project was to develop and implement brief, informative, and effective educational content related to central line care and maintenance. The goal of this project was to increase nursing knowledge and prevent CLABSI. An interdisciplinary team comprised of nursing, oncology providers, and infectious disease teams met to discuss the current CLABSI rate. Staff education on central line care was identified as a possible area for improvement. Education content was developed based upon the central line care hospital policy. The content was designed to be delivered during huddles and focused on proper technique when handling and accessing a central line, including the system wide bundle of care, blood sampling technique, culturing indications, and aseptic cap change. The clinical educator for the unit held brief, 5-10 minute, huddles across multiple shifts for RN staff over a 4 week period. Hands on demonstration and teach back was utilized and handouts were provided to staff. Initial success of this initiative was measured by CLABSI rates on the nursing division post education when compared to CLABSI rates

over the same time period of the previous year. A significant improvement in CLABSI rates was evident. Overall rates decreased from 10 primary CLABSI in 2022, to 2 to date in 2023. This project demonstrates the importance of continued education in all aspects of nursing care, even those tasks which are completed daily by the RN. Integrating educational content into brief huddles short throughout the week, allows for the RN to learn without the burden of having to find long periods of time to set aside. The lessons learned from this project can be applied to other standards of care education initiatives in an attempt to improve outcomes.

### **010 AMBULATORY ONCOLOGY: EXPERIENCE NOT REQUIRED! HOW TO EFFECTIVELY CREATE & IMPLEMENT AT NEW GRADUATE RN AMBU- LATORY FELLOWSHIP PROGRAM**

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Turnover and vacancy rates in oncology nursing have reached an all-time high. Evidence suggests this is due to burnout, poor job satisfaction, and ineffective leadership. Leaders are tasked with developing novel ways to improve these elements, while maintaining high-quality patient care. At our comprehensive cancer center, new graduate nurses are not allowed to begin their careers in the outpatient setting and are required to start as inpatient nurses to gain experience. This model is not sustainable due to the growth of ambulatory oncology and the continued nursing shortage. Furthermore, this policy has created the unintended consequence of increased turnover of nurses leaving the inpatient setting to outpatient. Creative strategies were needed to successfully onboard new graduates and potentially reduce inpatient turnover. The purpose of the project was twofold; first to develop, implement, and evaluate a new graduate RN ambulatory fellowship program. Second, to demonstrate if prolonged orientation leads to competence in novice nurses. A literature review was performed to understand current practices. Discussions with other hospitals were conducted to learn about program development, retention/turnover rates, and best practice. A nine-month, fellowship program was developed with the first cohort starting July 2023. Key elements created were a website, electronic feedback system,

preceptor class, and an orientation curriculum. Fellows rotate through six ambulatory sites, with shadow experiences built into their orientation plan. Live and online didactic education was assigned to enhance fundamental knowledge. After six months, fellows will be matched with a unit, receiving an additional three months of onboarding. Electronic surveys were distributed to evaluate knowledge and skill. To date, all fellows have met 100% of their weekly objectives and 100% have improved their knowledge, and skills, especially with IV insertion, central line management, and blood transfusions. Unit preceptors have been engaged in this process and have observed this improvement in competence. Baseline vacancy and turnover rates were examined and were 15% and 11% respectively. Long term vacancy and turnover rates will be compared to pre-fellowship implementation rates in both the inpatient and outpatient settings. Developing an ambulatory fellowship program has allowed new RNs to understand the oncology patient experience. Retention rates for the fellows are pending. Data supports that new nurses can be successful in ambulatory with sufficient support and education to ensure retention of knowledge and competence.

### **011 IMPLEMENTING HIGH-FIDELITY SIMULA- TION TO ENHANCE BISPECIFIC ANTIBODY INDUCED CYTOKINE RELEASE SYNDROME EDUCATION**

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The emergence of bispecific antibodies (BsAbs) in the ambulatory oncology setting has created nursing education needs to identify, assess, and treat patients experiencing cytokine release syndrome (CRS). High-fidelity simulation can provide nurses with an innovative, hands-on learning experience in a safe environment and allow them to gain knowledge and confidence in caring for patients at risk for CRS. The purpose of this educational offering was to evaluate the impact of high-fidelity simulation on nursing knowledge and confidence when caring for a patient at risk for BsAbs-induced CRS. A high-fidelity simulation scenario depicting a patient with suspected BsAbs-induced CRS was developed and implemented with staff nurses who routinely treat patients receiving BsAbs medications in the ambulatory oncology setting. The simulation activity was provided twice and a total of

seven staff nurses and two nurse practitioners participated. The simulation occurred on the nursing staff's clinical unit, during work hours, and took approximately thirty minutes to complete. Nurses were provided with pre-briefing materials prior to the simulation. An introduction to the high-fidelity manikin was provided. After the scenario, nurses completed a thirty-minute debriefing discussion facilitated by the simulation instructor. Nurses completed anonymous pre- and post-activity paired questionnaires to provide feedback on the high-fidelity simulation. After participating in the high-fidelity simulation, eighty-nine percent of the nurses showed an increase in the rate of confidence in conducting assessments appropriate for the care of a patient with suspected CRS as well as identification of priority interventions in these patients. Seventy-eight percent of the nurses showed an increase in confidence in interprofessional communication to facilitate the care of a patient with suspected CRS. All nurses agreed the CRS simulation was a valuable use of their time and would participate in simulation activities in the future. High-fidelity simulation was an effective and innovative educational activity to enhance nurses' confidence and knowledge in caring for a patient at risk for CRS. The high-fidelity simulation environment provided a safe learning space and debriefing enhanced critical thinking and reinforced clinical reasoning. High-fidelity simulation should be incorporated into oncology nursing education to improve nurses' knowledge and confidence, while potentially improving patient outcomes.

## **012 HONORING OUR JOURNEYS: THE IMPORTANCE OF PALLIATIVE CARE AND NARRATIVE MEDICINE IN ONCOLOGY**

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At a National Cancer Institute (NCI) designated Comprehensive Cancer Center Palliative care is a pivotal component of comprehensive oncology care. (n=120,000 patient visits annually and n=57,000 physicians and staff) The intersections of diversity, equity, and inclusion (DEI) in the effective integration of palliative care was identified as a potential opportunity to expand best practices across care delivery in the cancer trajectory. The purpose was to describe a CE-accredited educational offering for oncology clinical staff that incorporated narrative medicine techniques to enhance DEI across the continuum of palliative care, while facilitating a healing landscape in which patients, families, and the workforce can

ideally honor their unique, respective journeys. As an element of graduate studies an oncology nurse researched palliative care and narrative medicine to develop a webinar delivered live and available for on demand viewing. Disparities and Bias in Cancer Care were discussed. The HUMBLE model was utilized to explore acceptance of differences that may include race and ethnicity, gender identity, national origin, religion, sexual orientation, neurodiversity, and how one physically, emotionally, and spiritually navigates the world. A world-cloud exercise using the painting "Sea and Rain" by James McNeill Whistler (1865) provided an opportunity for reflection, and audience engagement for content integration. A brief introduction to narrative medicine was provided through the sharing of knowledge gained through an interview with the founder of this philosophy, while integrating imagery and real-world examples from nursing practice to exhibit the potentiality and ideal of narrative medicine and palliative care as a whole. A diverse group of oncology clinical staff including: LPNs, Nurse Managers, Program Directors, Nurse Practitioners, Nurse Educators/Clinical Nurse Specialists, and RNs from three different campuses of our cancer center. Preliminary evaluation data compiled from post-webinar RedCap surveys demonstrated positive learning from the content in addition to reflections regarding how the content may potentially impact the way in which oncology clinical staff approach how they carry out their roles as caregivers. The Webinar via on demand viewing continues to be utilized as a CE-accredited course. The provision of culturally-sensitive palliative care is appropriate at all time points in the oncology care continuum and should be uniquely offered to individuals with intentional respect, while honoring diversity and the way in which all individuals uniquely live life in the ever-changing and complexities within the cancer journey.

## **013 CREATING AN ESCAPE ROOM TO TEACH NEUTROPENIC FEVER MANAGEMENT**

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Neutropenic fever is a life-threatening complication of cancer care. Cancer patients at our large academic medical center may present with fevers in the inpatient or outpatient setting. Timely, appropriate treatment is essential and requires critical thinking

and collaboration between team members. Nurse educators are continuously challenged to find new ways to teach critical information and problem-solving skills. Escape rooms, in which teams solve a series of puzzles and compete for the fastest time, have been documented as an educational tool in other nursing specialties but are relatively new to oncology. The purpose was to create an escape room to teach nurses to care for patients with neutropenic fever while promoting collaboration among inpatient and outpatient roles. Nurse leaders created an escape room as part of an annual competency assessment. Teams of 4-6 worked together to solve a series of puzzles that demonstrated the steps involved in the assessment, admission, and initial management of a patient with neutropenic fever. We intentionally built teams with a mix of inpatient, primary outpatient, and infusion room nurses. Teams competed to complete the escape room in the fastest time. Participants evaluated the escape room on a 10-point Likert scale and we invited them to provide narrative feedback on their experience. 56 nurses completed the escape room in spring 2023. Inpatient nurses participated as part of their annual education day while we pulled outpatient nurses out of their assignment during their scheduled shift. It took an average of 42 minutes to complete the escape room with the winning team taking 25 minutes. Feedback was overwhelmingly positive with participants rating the experience an average 9.8/10. Many participants noted it was their favorite part of the education day, helping build teamwork while testing their knowledge. Observers noted participants working together and calling on the varied expertise of their colleagues. The escape room was a fun way to engage nurses and build a supportive team. Small teams of four nurses worked best. The biggest challenge was scheduling time for outpatient nurses to leave their assignment during a scheduled shift. For future collaboration on education, we would schedule time away from regular duties for both groups. The positive feedback suggests that gamification with escape rooms increases nurses' engagement with educational content.

#### **014 MENTORING THE MENTORS: A STRATEGY FOR DEVELOPING COMPETENCE OF EVIDENCE-BASED PRACTICE MENTORS SERVING ON OUR NURSING PROFESSIONAL GOVERNANCE COUNCILS**

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Evidence-based practice (EBP) models have been widely adopted by hospitals and rely on a critical mass of EBP mentors to guide nursing practice change initiatives. Competence in critical appraisal, literature synthesis, change processes, implementation, and sustainability is essential for EBP mentors to be effective. At our hospital, EBP mentors are assigned to Nursing Professional Governance (NPG) councils, including Oncology, to facilitate practice change. Despite offering study appraisal seminars, we identified multicausal gaps in EPB role functioning and knowledge of practice change processes. The purpose of this project was to re-design the education and competency development of EBP mentors. Our Nursing Research EBP subcommittee collaborated with the NPG Coordinating Council to establish a new competency strategy. The plan included reconstituting EBP mentor vacancies on councils and enlisting graduate-level nursing clinicians and research experts as mentors. Thirty mentors were enrolled as a cohort in The Fuld Institute's Online Modular EBP course for foundational knowledge. The cohort then attended an onboarding kickoff for new NPG members. The half-day program reviewed mentor role expectations, evidence appraisal tools, how to conduct journal clubs, study design, and the IOWA practice change model. Quarterly workshops were scheduled for the upcoming year on additional topics requested by mentors, such as how to access nursing outcome metrics. Pre and post course data was measured using The EBP Beliefs and EBP Implementation Scales (Melnik, Fineout-Overholt, & Mays 2008). Belief that they (mentor) could effectively search for evidence improved from 80% to 89%, were clear about EBP steps improved from 58% to 100%, could implement EBP in timely manner improved from 68% to 78%, and were sure how to overcome barriers improved from 60% to 89%. Notably, the Oncology Council led two major EBP initiatives. However, measures of EBP skills implementation in previous 8 weeks showed that only 11% critically appraised a study, generated a PICO question for their practice area or collected data on a clinical issue. Only 22% evaluated outcome of a practice change, or shared evidence with team members. The Fuld course positively affected the mentor's belief in the EPB process and confidence in their skills. We garnered approval to enroll a larger mentor cohort next year. Ongoing workshops promote mentor coherence and competency development. Opportunity

remains to improve frequency of putting those skills to use.

### **015 MENTORING NEW ONCOLOGY NURSES: DEVELOPMENT OF A STAFF LEAD MENTORSHIP PROGRAM ON A MEDICAL ONCOLOGY STEP-DOWN UNIT**

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Oncology units tend to have high turnover and higher rates of nurse burnout than general patient care units. On a medical oncology step-down unit at an urban academic medical center, many new graduate nurses were hired in the beginning of 2023 due to high turnover rates. To support the new oncology nurses after orientation, the shared governance unit council started a new graduate mentorship program. Mentorship relationships help provide role modeling, professional and psychosocial support for the mentee, and enhance professional development for both the mentor and mentee. The purpose of this project is to support new oncology nurses after orientation to a medical oncology step-down unit through a mentorship program and oncology nursing resources and education opportunities. Mentors were recruited by the shared governance unit council. New graduate nurses were paired based on mentors' experience, personality, working styles, and goals. A mentorship agreement was signed between the mentor and mentee including response times and methods of communication. Meetings were set to at least monthly. The mentorship program included: a mentorship orientation, oncology education materials, an essentials of oncology nursing CE course instructed by mentors, and instructions on how to access ONS resources. Mentees completed an oncology specific self-assessment prior to the program to assess their current knowledge, progress, and understand which areas to focus their learning and development. Confidence in oncology nursing was measured on a ten item 4-point Likert scale with 1 being rarely and 4 very often. The new graduate nurses answered the survey at the beginning of the mentorship program and every two months until completion of the program in six months. Prior to the program the mean score was 2.7 (sometimes), first posttest 2.9 (sometimes), second posttest 3.1 (often) and third posttest at completion

of program 3.3 (often). Nurses showed an increase in confidence over time during the mentorship program. This is possibly related to both the mentorship program and as the new nurses gained experience on the unit. The mentorship program was viewed as a success and will be continued as new staff are onboarded every six months.

### **016 FINDING FOCUS IN COMPLEXITY: DEVELOPING A COMPETENCY-BASED ORIENTATION FOR ONCOLOGY RESEARCH NURSE COORDINATORS**

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Oncology clinical trials are key to improving outcomes for cancer patients. Well-trained study personnel are essential to maintaining quality clinical trials. Oncology nurses have experience that prepares them to excel as research coordinators (CRC-RNs). However, coordination of clinical trials is complex and a strong orientation program is required to support nurses transitioning to clinical research roles. At our academic medical center, orientation of oncology CRC-RNs had been primarily mentor/shadowing-based with little formalized training. This led to delays in onboarding and independent practice. Our goal was to implement a competency-based orientation guided by the ONS Clinical Trials Nurse Competencies (2016) in order to reduce onboarding timelines. Using the ONS Clinical Trials Nurse Competencies as a guide we developed the following training materials:

- A CRC-RN handbook – later transitioned to training checklists in our project management software, Smartsheet.
- A “Didactic Day” featuring teaching on each competency area.
- A “Skills Lab” featuring hands-on research scenarios including reporting a deviation, drafting a serious adverse event report, consenting a mock patient and designing orders for a study

In addition, we formalized a supportive infrastructure for trainees including regular check ins with their mentor and 6 week reviews with their mentor and supervisor. Results were assessed through two metrics: 1.) Time from start date to Epic access (represents basic onboarding task completion); 2.) Time from start date to operating as a primary CRC-RN (represents time to basic competence). Data from a cohort of 6

recently hired CRC-RNs were reviewed. Regarding time to Epic access, timelines were reviewed for 3 CRC-RNs who started prior to the intervention and 3 who started after. Average time to Epic access was reduced by approximately 50% for CRC-RNs starting after the intervention. Time to operating as a primary CRC-RN was also significantly reduced. Though there are many contributing factors to an individual's success in the oncology CRC-RN role, a strong orientation program is key. Training based on the ONS Clinical Trials Nurse Competencies can lend structure and context to the role. Clear, shared checklists make it simple for orientees to efficiently complete required onboarding. The implementation of a didactic day and skills lab supports CRC-RNs in moving quickly to independence by providing education and hands-on practice. Sites can implement these interventions to improve their orientation programs.

## **017 IMPLEMENTATION OF HAZARDOUS DRUG SPILL COMPETENCY TO INCREASE ONCOLOGY NURSE COMFORT AND REDUCE EXPOSURE RISK**

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There is significant risk for exposure to hazardous drugs (HDs) among healthcare workers, especially those working in oncology. This is due to frequent HD administration, disposal, handling of bodily fluids, and cleaning of HD spills. Increased exposure may lead to serious effects to healthcare workers' health, fertility, and pregnancy. The cleaning of HD spills is an essential skill for the oncology nurse to ensure personal and environmental safety measures are properly taken to reduce risk of exposure to HDs, yet is often overlooked as a competency measure. Acquisition of knowledge and skills for HD spill cleanup can prepare the oncology nurse for decreased risk of exposure, and increase comfort level when cleaning an HD spill. At an NCI designated comprehensive cancer center, HD spill cleanup simulation was developed for inpatient oncology nurses with return demonstration for skill competency to increase nurse comfort level and reduce exposure risk. Two oncology clinical nurse educators (CNEs) and an oncology clinical nurse specialist (CNS) collaborated to develop HD drug cleanup education material, competency checklist, and a simulation learning experience. Anonymous pre-

assessment was administered to oncology nurses prior to the learning experience to gather responses on nurse comfort level with cleaning HD spills. Oncology nurses completed the simulation and received evidence based practice remediation from the CNEs and CNS as needed, with opportunity for questions and answers. Anonymous post-assessment was administered to gather responses on nurse comfort level with cleaning HD spills. Nurse comfort level with cleaning HD spills was compared between pre- and post-assessments. Comfort level was assessed as "very uncomfortable," "somewhat uncomfortable," "neutral," "somewhat comfortable," and "very comfortable." Pre-assessment "very comfortable" rate was 12.9% whereas post-assessment "very comfortable" rate was 61.7%. The simulation learning experience was specifically identified as the leading factor for increased nurse comfort level with cleaning HD spills. Creation of HD drug cleanup education material, competency checklist, and a simulation learning experience allowed nurses to practice safe HD spill cleanup. Implementation outcomes suggest knowledge and skills for HD spill cleanup can prepare the oncology nurse for decreased risk of exposure, and increase comfort level when cleaning an HD spill. Changes to annual competency curriculum were made based on nurse feedback and outcomes data.

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## **QUALITY IMPROVEMENT**

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### **01 CREATING NEW NORMS: PROVIDING CHEMOTHERAPY EDUCATION FOR THE NOVICE NURSE**

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Oncology nurses caring for patients undergoing chemotherapy must be equipped with the tools to keep their patients and themselves safe. There is no national standard for when nurses are expected to complete the ONS Chemotherapy Provider Course. The ONS Chemotherapy Provider Courses are encouraged to be taken when nurses are prepared to administer chemotherapy directly. Currently, nurses new to oncology complete the orientation process and are encouraged to complete the ONS Chemotherapy Provider Course at 6-9 months. There is no evidence that supports waiting this timeframe to complete the course. Within the time frame before course completion, they

care for patients receiving chemotherapy, manage side effects, and provide education. This project aimed to assess the benefits of new graduate nurses completing the ONS Chemotherapy Provider Course during orientation. Before starting the course, participants completed a pre-test that assessed their comfort level and perceived preparedness in caring for patients on chemotherapy. Participants were given fourteen days to complete the course. Following completion of the course, participants completed a post-survey. Knowledge checks on cancer care and hazardous drug precautions were included in the pre-and post-tests. All participants had cared for a patient on chemotherapy before taking the course. 50% reported they understood how to care for a patient on chemotherapy. 100% of participants reported they needed more confidence in their knowledge of hazardous drug safety and their ability to care for a patient on chemotherapy. Following certificate completion, 100% of participants reported increased understanding and confidence in caring for a patient on chemotherapy. Nurses new to oncology need to be provided with the education necessary to keep patients and themselves safe. There is a long-standing expectation that nurses new to oncology care for patients on chemotherapy and take the ONS Chemotherapy Provider Course only when ready to administer chemotherapy. The course provides learners with valuable information that can benefit nurses and families long before they are ready to be the ones administering chemotherapy. This study exemplifies the positive effects of earlier completion of the ONS Chemotherapy Provider Course on the new oncology nurse's understanding and confidence in caring for a patient on chemotherapy.

## **02 NAVIGATING WITHOUT A MAP? CREATING A PROCESS MAP TO IMPROVE CARE CO- ORDINATION FOR UNINSURED ONCOLOGY PATIENTS**

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Social determinants of health (financial insecurity, lack of health insurance) impact clinical outcomes for oncology patients. Medically uninsured adults experience difficulty accessing cancer prevention, early detection, and treatment services. Of concern, our state has twice the national average of uninsured

individuals with our county having the highest number when compared with similar-sized counties. At our hospital, we encountered additional complexities (outside-county residents, unsheltered individuals, undocumented immigrants). Lack of formal training, unclear referral processes, and conflicting information among multidisciplinary team members led to inconsistency and disorganization when navigating uninsured patients to safety-net hospitals. Poorly managed care coordination led to treatment delays, increased length of stay (LOS), hospital readmissions, and financial burdens on patients and hospitals. Oncology nurse navigators (ONNs) have a unique role in addressing healthcare barriers of the uninsured. The goal of this project was to formalize the navigation process for uninsured oncology patients, thus providing a seamless care transition to safety-net hospitals using available city and county resources. Our team (ONNs, manager) reviewed our current navigation process, using sticky notes to organize steps in sequential order. We met with representatives from the hospital residents' clinic, adjacent county indigent healthcare programs, and a local homeless shelter's medical respite program to clarify eligibility requirements. Discussions with safety-net hospitals (financial counselors, referral coordinators, ONNs) confirmed their referral processes. We utilized free software systems to create a swimlane process map (which indicates who is responsible for each step) and to organize referral documents within electronic shared files. ONNs found the formalized navigation process (process map, electronic files) user-friendly and valuable in identifying time-saving opportunities. Navigator referrals increased after correcting misconceptions (certain safety-net hospitals accept outside-county residents and undocumented immigrants). Expanded knowledge of the process allowed ONNs to confidently answer questions regarding referral status. Care coordination became streamlined when navigating patients to safety-net hospitals, resulting in fewer days from referral to appointment. Oncology navigation programs vary across the country due to diverse community needs and available resources. Our process map offers a template whereby cancer programs can tailor uninsured navigation processes for their institution. Electronic files allow real-time access to information for effective cross-coverage and continuity of care. ONNs have a pivotal role in planning care for the uninsured; when equipped with the necessary tools, they can become invaluable advocates and sources of hope.

### 03 IMPLEMENTATION AND ACTION: A SYSTEM WIDE SAFETY HUDDLE TO IMPROVE QUALITY, SAFETY AND FRONT-LINE STAFF ENGAGEMENT

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The Hartford Healthcare (HHC) Cancer Institute is an Institute for Healthcare Improvement (IHI) designated “Age Friendly” healthcare site. The IHI is dedicated to making care continually safer by reducing harm and preventable mortality. This is accomplished by promoting organizations to “move from silos of safety to systems of safety by enhancing reliability and resilience” (<http://www.ih.org/Topics/PatientSafety/Pages/Overview.aspx>). The HHC Cancer Institute is comprised of 7 hospitals, 13 medical oncology practices/infusion centers and 6 Radiation Oncology Centers. An opportunity was identified to address a communication gap related to quality and safety across the acute and ambulatory oncology settings. Safety events were not shared with frontline staff in a timely, structured and clinically tangible way to address concerns and create solutions. The purpose was to create a structure for frontline inter-professional oncology staff to share safety events, announcements and education in a weekly huddle across the cancer care continuum. In 2019 nursing leadership established a 30-minute weekly nurse led HHC Cancer Institute Patient Safety Action Group (PSAG) virtual call for all acute care and ambulatory oncology areas. At present, 42 clinical areas report and weekly data on events is collected for follow up action. Reportable events include; patient falls, adverse drug reactions, chemotherapy spills, venous access devices, sepsis/febrile neutropenia, and “near miss” events. It also includes a “resiliency moment” and closes with a five-minute meditation. The meetings have expanded to include: announcements for Institute educational/competency opportunities and clinical practice up-dates. It is run by frontline staff and includes pharmacists, radiation therapists and nurses. The collection and reporting of weekly safety issues has created a mechanism for early identification of safety issues with standard work solutions. The “tracker” is a working blueprint that prevents ideas and issues from being lost. The work dovetails with Lean methodology, our standard platform. This data has informed the development of

system wide and local quality dashboards to track opportunities to improve quality, safety and experience. A system wide safety huddle to improve quality, safety and front-line staff engagement has proven to be a successful intervention that addresses the inherent risk that oncology patients experience receiving care in acute and ambulatory care settings.

### 04 APPLYING HUMAN FACTORS ENGINEERING AND ASCO QOPI STANDARDS TO PREVENT CHEMOTHERAPY ERRORS

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Although chemotherapy is a well-established treatment modality, the administration process differs widely among facilities posing significant risks to patient safety. In the infusion center, two medication errors related to continuous infusion of chemotherapy were reported. Growing evidence reveals the critical role of human factors engineering in designing systems to optimize patient safety. Quality Oncology Practice Initiative (QOPI) Standards serve as a framework for best practices in oncology. This project aimed to (1) develop a pre-chemotherapy checklist and bedside verification based on QOPI standards 3.2, 3.7, and 3.8 and (2) apply principles of human factors engineering to document bedside verification in the electronic health record. The reasons for the errors included the fast-paced workflow and the lack of two RN verification of the status of clamps on the continuous infusion pumps. The clinical professional development educator reviewed the QOPI standards and developed a pre-chemotherapy checklist and bedside verification to incorporate these standards. The educator also recommended building the bedside verification in the electronic medication administration record (eMAR) as a forcing function requiring independent verification by two RNs. After seeking approval from the unit leadership, the educator collaborated with the manager, pharmacy, nursing informatics, and pharmacy informatics team to build these items in the electronic health record. The educator trained the clinical nurses on how to use the checklist and bedside verification before implementation. The measurable outcomes include reduced medication errors and compliance with documentation of standards for QOPI certification. Humans make mistakes for several reasons such as fatigue, distractions, poor communication, knowledge deficit, and poorly designed workflow. Understanding and acknowledging the role of human factors provides valuable insight

into the reduction of medical errors. Taking a systems approach shifts healthcare away from a blaming culture and towards a just culture. For example, a forcing function is a valuable tool that prevents an unintended action from being performed or allows its performance only if another specific action is performed first. A process is established for the verification of chemotherapy based on QOPI standards and documentation of the nine elements of verification. The employment of safety standards is imperative to the safe delivery of chemotherapy. This interdisciplinary project highlights the importance of system safeguards and multidisciplinary collaboration which are critical elements of delivering quality care.

## **05 CIVIC DUTY: COMBATING INCIVILITY AND VIOLENCE IN CLINICAL SETTINGS**

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Incivility committed by patients and their visitors is prominent within the oncology nurse work environment and can have negative consequences for patients, nurses, and organizations. Unfortunately, the full scope of incivility in the clinical setting is unable to be captured due to underreporting which also impacts the ability to calculate precise incidence and prevalence. Reasons for underreporting in the healthcare industry is multifaceted and remains a barrier to the successful implementation of interventions to prevent incivility. The COVID-19 pandemic has also been identified as a precursor to increasing incivility in the health care landscape. It is imperative that oncology nursing leaders assess and address patient and visitor incivility in the clinical setting to sustain the nursing workforce and maintain patient quality and safety. The purpose of this quality improvement project was to increase formal incivility reporting in an outpatient oncology infusion unit by 5% over three months. A comprehensive review of the literature determined staff education, nursing leadership support and incivility policy review and awareness as interventions that increase formal reporting. Together these interventions were coined as CIVIC Duty which stands for Combating Incivility and Violence in Clinical Settings. Utilizing the Model for Improvement (Plan, Do, Study Act), CIVIC Duty interventions were developed and implemented in an outpatient oncology infusion unit to increase formal incivility reporting committed by patients and their visitors. A sixty-minute educational program was created which defined incivility and behaviors and reviewed the organiza-

tional policies and mandatory requirement to formally report incivility. Nursing leadership support was provided in real time during incivility events by nurse managers and CIVIC Duty Advocates to assist and encourage incivility reporting. These beneficial, low cost and high feasibility interventions can easily be replicated in other clinical settings to assess incivility. Implementation of CIVIC Duty Interventions resulted in a significant 41% increase in formal incivility reporting as evidenced by formal event reporting data. Additionally, nurses reported feeling more empowered to advocate for themselves and deescalate incivility situations. Incivility in the clinical setting creates an unhealthy work environment, negatively impacts patient quality, safety, nurse satisfaction and retention, and jeopardizes the financial health and reputation of organizations. Increased formal reporting is needed to accurately convey the issue in the clinical setting and secure more resources to prevent incivility and sustain the nursing workforce.

## **06 REMOTE NURSE TRIAGE IMPACT ON CLINIC-BASED NURSING WORKLOAD AND IMPROVED PATIENT SATISFACTION**

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Hiring and retention of experienced Oncology nursing staff has become increasingly difficult. Many community-based oncology practices are under-staffed, resulting in nursing staff burnout, job dissatisfaction, and decreased patient satisfaction related to needs resolution. The workload and expectations of in-clinic nursing staff has increased dramatically over the last 5 years, making in-person clinic-based nursing roles less attractive and harder to fill. Remote positions were filled quickly to supplement in-person nursing staff with patient symptom management needs. Remote work for Oncology nurses is a rare, attractive opportunity and isn't limited to a specific geographic region allowing to hire outside of current in-person staffing areas. The Remote triage team assists with reducing in-person workload by dedicating their time to addressing patient concerns quickly without clinic disruptions. This allows clinic staff to focus on in-person patient care without being tied to the telephone. By implementing this we improve patient satisfaction

with quicker needs resolution and standardized pathway utilization. A remote triage team was established to support clinics in a community-based oncology practice. The nurses on this team were provided with uniform onboarding and training, standardized quality expectations, and board-approved standing orders and clinical pathways to resolve routine patient symptom issues via a digital care management system. Patient satisfaction scores were collected monthly through electronic standardized feedback survey, with pre-triage support scores being compared to current scores for selected pilot clinics. A survey was sent out to all sites for clinical staff (focused on registered nurses) to indicate their satisfaction with the Remote Triage team as well as the impact of daily work volume they have felt since the implementation of the program at their site. Survey results were analyzed to determine that employee satisfaction was consistent at 75% and patient satisfaction with telephone incident resolution increased from 3.9 to 4.5 on a 5-point scale post implementation. With symptom management calls often taking the most time to resolve, virtual triage was able to resolve 78% of them and remove this volume of work from the in-person staff. Upon evaluation 76% of clinical staff reported feeling a positive impact on their daily workload. Simultaneously, patient needs are being addressed timely and correctly the first time resulting in a 8% decrease in clinical call volumes to the site.

## **07 UTILIZING TECHNOLOGY TO IMPROVE HAND HYGIENE COMPLIANCE ON A HEMATOLOGY-ONCOLOGY UNIT**

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Hand Hygiene (HH) is the most effective method of infection prevention among immunocompromised patients. On an inpatient hematology-oncology unit, internal data revealed HH compliance did not meet institutional goals. Ecolab sensors, an innovative data-collecting and observational tool, are individualized badges assigned to staff members that can record HH events and provide reminders for HH. The purpose of this project was to increase HH compliance rates among healthcare staff in a hematology-oncology unit by utilizing Ecolab sensors and educational reminders. A nurse-led HH intervention, using the Plan, Do, Study, Act model, was implemented between July - September 2023. Ecolab sensors were distributed to assist with HH compliance. Ecolab sensors were as-

signed to each staff member and have the functionality to collect data usage at sanitizing dispensers and handwashing stations, monitor HH before and after direct patient contact, and emit various lights or sounds to remind the user to perform HH. Evidence-based flyers and unit huddle announcements were used to create HH awareness. Compliance updates and analytic reports were used to celebrate unit progress and incentivize staff utilization of the Ecolab sensors. Baseline HH compliance rates were 39%. Post-implementation, HH compliance rate increased to 75%. Nursing knowledge regarding the importance of HH for immunocompromised patient care was measured using a pre-/post-survey design. Post-intervention survey results indicated increased nursing knowledge. Clostridium difficile (C. Diff), catheter associated urinary tract infection (CAUTI), and central line associated bloodstream infection (CLABSI) rate trends are also being reviewed to determine interventional impact on direct patient care. Oncology patients have higher risk for infections, making HH a significant prevention tool. Incentives, leadership support, and staff emails were implemented to encourage Ecolab sensor use. While Ecolab technology has been helpful in improving HH rates, some limitations include operational oversight, resource allocation, and consistent staff compliance with wearing the Ecolab sensor. Despite increasing HH compliance, the unit remained below institutional HH goals of 95%. Monthly meetings with unit leadership are planned to evaluate the ongoing process and ensure long-term sustainability.

## **08 IMPLEMENTATION OF A HOME-BASED WALKING PROGRAM TO ADDRESS CANCER-RELATED FATIGUE**

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Cancer-related fatigue (CRF) is the most common symptom reported by adult outpatient oncology patients receiving chemotherapy, immunotherapy, or targeted therapy; however, this symptom is rarely addressed by the oncology team. CRF negatively impacts social interactions, activities of daily living, mood, physical functioning, cognitive performance, nausea, vomiting, and pain. The non-treatment of CRF in adult oncology patients on treatment is a

clinical practice issue identified globally. Despite the growing evidence supporting physical activity to address CRF, this problem remains prominent. An 8-week home-based walking program was implemented at an outpatient hematology and oncology clinic to address the non-treatment of CRF. This project aimed to increase the prevalence of managing CRF and reduce the severity of CRF through walking. Oncology providers and nurses were educated about their role in the recruitment process and data collection phase. With the provider's recommendation, adult oncology patients on chemotherapy, immunotherapy, or targeted therapy registered for the program in the 3-week recruitment period, and then followed the 8-week walking regimen. The walking regimen started at 15 minutes three to five times a week and gradually increased to 30 minutes three to five times a week. Pre- and post-intervention CRF levels were assessed using the Functional Assessment of Chronic Illness Therapy (FACIT)-Fatigue. Fourteen patients participated in the walking program, and 12 patients were compliant with the regimen. There was an improvement in the prevalence of addressing CRF and CRF levels. Through the implementation of the walking program, 14 patients were recommended to the walking program, while only 10 of the participants were encouraged to exercise prior to the program ( $p = 0.03$ ). Of the 14 participants, CRF levels significantly decreased from the pre- and post-walking program ( $p = 0.031$ ). Of the 12 compliant participants, CRF levels significantly decreased from the pre- to post-walking program ( $p < 0.001$ ). Based on the best available evidence, physical activity, specifically, walking is an effective intervention to address and reduce CRF, while also being cost-effective. Addressing and improving CRF is a critical first step in improving the short-term and long-term outcomes for adult oncology patients. CRF is now frequently addressed by recommending walking at the outpatient clinic. The next step to overcoming this clinical practice issue is implementing the walking regimen at additional infusion clinics throughout the same system.

## 09

### ONCE UPON A TRIAGE: A THORACIC TALE

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The definition of telehealth nursing is thought of as the use of telemedicine and technology to conduct nursing and deliver care in a remote location. In an effort to provide real time communication for patients and clinical teams, the Thoracic Center implemented a live answer triage role to be able to assist patients with immediate care needs. In response to targeted Press Ganey scores and the Culture of Safety survey, a standardize triage process was implemented. The purpose of the initiative was to increase patient and staff satisfaction, reduce the scheduler work queue, provide quicker response times to patients, and create standardized documentation and processes for nursing triage. Nurses were provided triage specific education including attendance to the "Telehealth for Oncology Nurses: Symptom Management Focus" course and provided the "Telephone Triage for Oncology Nurses" textbook. After education was completed, nursing staff was given hands on training on the use of the telephone system and a triage line was designated for them. The team developed a standard of practice, specific documentation requirements and standardized assessment processes for the Thoracic Oncology patient population. Press Ganey Scores for "phone during office hours answered same day" increased by 45.5%. Scheduler phone calls decreased by 37.2%, which allowed more time to work on scheduling orders in their queue and providing patients with more timely appointments. With assigned triage staff scheduled each day, and removal of standard voice-mail lines, nursing staff was able to complete more timely responses to in-basket messages and completion of care coordination for patients. Staff feedback further showed that the program improved communication among teams, allowed both schedulers and nurses to focus on other needed areas of care and improved response times for patients. Implementing a triage protocol provided live, immediate patient care that overall improved response time for patients. Staff reported improved work processes having more focused time on tasks, clear assignments, reduced calls to the scheduler group, reduced walk-in patients, and created the ability to work remotely while covering triage. The triage process is now standardized within the department and the processes implemented are being utilized in other areas. The team continues to monitor data points to ensure long term success of the program for both patients and staff.

## 010

### EVALUATION OF A NURSE-DRIVEN ADVANCE CARE PLANNING WORKFLOW IN AN OUTPATIENT ONCOLOGY CLINIC

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Advance care planning (ACP) is a process for identifying patients' wishes regarding healthcare interventions and nominating a healthcare power-of-attorney. Given the life-limiting prognoses of many cancer diagnoses, early, repeated, and interdisciplinary ACP for oncology patients is best practice. However, most patients have their first ACP discussion while inpatient within 3 months of death, which is associated with more aggressive care at end-of-life that does not necessarily align with patient wishes. Barriers to best practice include limited provider time, limited healthcare professional training, and lack of standardized workflows. The purpose of this quality improvement project was to evaluate the feasibility, acceptability, and appropriateness of a nurse-driven ACP workflow in an outpatient breast cancer clinic. The project further sought to evaluate the impact of the workflow on advance directive completion and ACP notes. This project followed the plan-do-study-act (PDSA) framework. Nurses and physicians planned the project guided by a literature review. Patients seen by two outpatient physicians were screened for interest in completing an advance directive. Interested patients met with trained nurse champions to discuss completion of a standardized advance directive called Our Care Wishes. Nurses completed a standardized note for all encounters. Completed advance directives were scanned into the medical record. Process measures were monitored including the percent of screening emails and in-person interactions that led to advance directives. Outcome measures included the number of advance directives and ACP notes available in the electronic health record. Balancing measures using the Acceptability of the Intervention Measure (AIM), Intervention Appropriateness Measure (IAM), and Feasibility of Intervention Measure

(FIM) were collected from clinic staff. The first PDSA cycle will be completed in December 2023. It is anticipated that advance directives and ACP notes in the electronic health record will increase by 20% compared to baseline. It is anticipated that the average AIM, IAM, and FIM scale scores will be greater than 15, reflecting high levels of acceptability, appropriateness, and feasibility. Nurses are essential members of the interdisciplinary team who can lead ACP discussions with patients. By starting the conversation with an advance directive, nurses can build a foundation for future ACP with other members of the interdisciplinary team. Based on the findings of this study, the proposed project could be expanded to the entire service line.

## 011

### THE IMPACT OF UTILIZING A NURSING TAG TEAM MODEL TO INCREASE BEDSIDE REGISTERED NURSES PARTICIPATION IN ONCOLOGY INTERPROFESSIONAL ROUNDS

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Many studies show that bedside nurses participating in interprofessional rounding not merely promote physician-nurse communication but also improves nursing knowledge. However, much evidence and the current practice in our inpatient oncology unit find that ongoing nursing tasks often take nurses away from rounds thus discouraging them from participating in interprofessional rounds at all. Evidence-based studies support that team-based nursing, such as the Tag-Team method, enhances the coordination of nursing interventions avoiding interruptions in the delivery of patient care and nursing tasks. The aim of this project was to increase nurses' participation in interprofessional rounds by utilizing a Tag-Team method. Two nurses were paired together as Tag-Team during the time period when interprofessional rounds occurred. One nurse worked as a primary nurse rounding with physicians at bedside. The second nurse took care of patients' immediate needs for the primary nurse during rounds. A daily goal sheet was designed for bedside nurses to discuss with physicians about patients' plan of care at the bedside.

Pre- and post – survey was disseminated to participating nurses. The daily goal sheets were collected after rounds and used to analyze the main conversation topics between physicians and nurses during rounds. First, using the Tag-Team method, the frequency of nurses participating in interprofessional rounds increased significantly from pre-intervention 14.3% to post-intervention 88.9%. Second, 65.0% of discussions between physicians and nurses were regarding the plan of continuing chemotherapy and monitoring patients, 15.6% about initiating chemotherapy safely, 16.5% plan of discharge patients safely, and 2.8% about reducing adverse side effects via dose holding or reduction. Lastly, 78.0% nurses expressed in the post-survey that they not only had gained oncology knowledge from rounds, but also, they had a greater understanding regarding the rationale of patient care plan, discharge plan, and administering chemotherapy safely. The Tag-Team method is a successful practice to increase bedside nurses in participating interprofessional rounds. This increased participation of nurses in interprofessional rounding promotes a more effective physician-nurse communication regarding a safer provision of chemotherapy administration along with a better prevention of adverse effects from chemotherapy and a safe patient discharge planning. Furthermore, participating in interprofessional rounds improves nurses ‘oncology nursing knowledge and the rationale related to acute oncology care specific to their patient.

## 012 INCREASING TESTICULAR SELF-EXAMINATION PRACTICES IN MALE COLLEGE STUDENTS

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Testicular cancer is one of the most commonly diagnosed solid malignancies in men between the ages of 15 and 35. A significant proportion of men attending colleges and universities have limited or no current knowledge of testicular cancer and screening practice. The evidence-based health promotion project aimed to increase testicular self-examination practices in male college students and increase their knowledge of testicular cancer. The main purpose was to investigate if an educational intervention along with the Ball Checker © mobile reminder application was beneficial to increase self-reports of testicular self-examinations and increase knowledge of testicular cancer. Surveys were modified with approval from the Center for Advocacy for Cancer of the Testes International contain-

ing basic questions about testicular cancer and testicular self-examinations. After male college students completed a pre-interventional survey, an educational intervention was executed explaining signs and symptoms, diagnosis, and incidence of testicular cancer. The educational intervention also discussed how to perform routine testicular self-examinations and how to implement the Ball Checker mobile reminder application to help sustain exam practices. After the educational intervention was completed, an immediate post-interventional survey was administered to evaluate the subject’s newly obtained knowledge of testicular cancer and practices. A follow-up survey was administered 45 days later to evaluate retained knowledge of testicular cancer, testicular self-examinations, and the use of the Ball Checker mobile reminder application. Data was analyzed using the 2 tailed t-tests analysis tool in Excel. The sample size consisted of 10 male college student participants (n=10). Prior to completing the educational bundle, results from the pre-interventional survey displayed a lack of knowledge of testicular cancer and how/when to perform testicular self-examinations. Immediately after the educational intervention and implementation of the Ball Checker application, pre- and post-interventional survey data analysis revealed a statistically significant increase in knowledge of testicular cancer signs and symptoms (p=0.43) and common causes of testicular cancer (p=0.43). Qualitative findings revealed most participants did not have any previous testicular self-exam training. The initiated educational intervention along with the Ball Checker reminder mobile application did increase the knowledge of testicular cancer and the practice of males performing testicular self-examinations. Testicular self-examination educational programs can be implemented in schools, colleges, and male prominent businesses to promote testicular self-examination practices and increase knowledge of testicular cancer.

## 013 SYSTEM APPROACH TO FERTILITY PRESERVATION AND PREGNANCY STATUS DURING ACTIVE CANCER TREATMENT

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Oncology nurses are advocates for patient safety during all phases of cancer treatment, often serving as the last barrier prior to the patient receiving therapy. Hospital policies may lack standardization for

discussing the risks of infertility, fertility preservation options, and pregnancy testing for women of child-bearing potential (WOCBP). The American Society of Clinical Oncologists (ASCO) Quality Oncology Practice Initiative (QOPI®) Certification Program sets the standard that health care providers should initiate the discussion on the possibility of infertility with patients with cancer during their reproductive years before treatment starts (2.2.3,5.). In addition, a documented pregnancy screening is required on WOCBP prior to treatment (1.2.4). Use of information systems to standardize workflows allows the oncology nurse to objectively collect a pregnancy test for WOCBP and ensure patients can make informed decisions about their cancer care. The purpose was to create and standardize a system approach to fertility preservation and pregnancy status during active cancer treatment. Interventions were as follows:

- Collaborated with IT Epic Application Analyst on electronic Fertility Risk Checklist that is a hard stop for physicians prior to signing cycle 1 chemotherapy or immunotherapy in the treatment plan (11/24/2022).
- Collaborated with Business Intelligence Developer for Oncofertility Report build to track compliance.
- Order group for pregnancy testing added to treatment plans for women, ages 18-50, with no documented exclusionary criteria (9/19/2023).

Evaluation was as follows:

- Pre-round two from 2021 QOPI submission found infertility risk was discussed only 57.14% of the time.
- Goal was to increase documentation compliance by 20% (68.57%) by use of a Fertility Risk Checklist for men and women, age 18-50, who are ordered an active treatment plan for cancer by the end of fiscal year 2023.
- After implementation of the Fertility Risk Checklist, 86.96% of discussions were documented.
- Baseline Q4 FY23 20% compliant with obtaining pregnancy test two weeks prior to new start.
- Order group went live 9/19/23, post data metrics pending

Patients have the right to make informed decisions for fertility preservation. Using information systems to get pregnancy testing for WOCBP automatically added to cancer treatment plans allows for a system approach to consistent and safe practices. A clear policy outlining standard of practice improves cancer care across hospital organizations. Nurses are essential to implementing interventions to improve survivorship issues for populations at risk. At the forefront

is ensuring a WOCBP's pregnancy status is readily available.

#### **014 INCENTIVIZING MOVEMENT AND MOBILITY TO DECREASE VENOUS THROMBOSIS AND MEET MOBILITY GOALS IN HEMATOPOIETIC STEM CELL TRANSPLANT PATIENTS**

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Hematopoietic stem cell transplant patients are at a high risk for developing venous thrombosis due to high dose treatments, long hospital stays, and decreased mobility. Management of VTE in stem cell patients is complicated by their risk of bleeding from chemotherapy induced thrombocytopenia. The Movement and Mobility project, or M&M, was created to encourage and incentivize patients to ambulate and therefore decrease their risk of developing thrombi and increase likelihood of meeting individualized mobility goals. The purpose of this project is to increase patient motivation for mobility and decrease DVTs on the BMT unit by 75% compared to 2022. Using the PDCA framework, the Movement and Mobility program was piloted on a 22-bed inpatient stem cell transplant unit. For every two laps a patient completed, they received one M&M. Accrued M&Ms served as a "currency" that were used to redeem prize items from a prize list. Items were categorized into different groups based on quantity of accrued M&Ms, ranging from 5 to 25. VTE education and project details were provided upon admission by staff, and a locked box was placed at the nurse's station for survey collection. Survey questions evaluated whether patients believed the M&M program helped them to meet their mobility goals and if they recommend continuing the program. Fourteen surveys were collected from patients and 100% stated that the movement mobility project increased their motivation to meet their mobility goals and they would recommend program continuation. The physical therapy team who works with the transplant patients agree that this program has increased patients' motivation to ambulate. Post intervention, this unit was awarded the hospital VTE prevention banner as the only unit in the hospital with 0 VTEs for the quarter. Assessment and fostering patient motivation to ambulate and mobilize can be overlooked amongst all the potential complications stem cell transplant patients face. Using programs to incen-

tivize movement may mitigate incidence of venous thrombosis, severity of loss of functional strength, and physical debilitation post chemotherapy and stem cell transplant. A collaborative approach including nursing, nursing assistants, and the physical therapy team optimized efforts in assisting patients with meeting their mobility goals. Patients are excited to participate in the program and have consistently given positive feedback. Future practice includes monitoring how increased mobility impacts other quality indicators such as pressure injuries and length of stay.

### **015 IMPLEMENTATION OF EVIDENCE-BASED PRACTICE IN A RURAL CANCER CENTER UTILIZING A MULTI-FACETED APPROACH**

**Susan O'Neill, DNP, RN, OCN, Southern Illinois Health-care, Carterville, IL**

Evidence-based practice (EBP) empowers oncology nurses to challenge their practice, influence change, and improve clinical outcomes, however, challenges exist in rural settings with limited resources. The oncology team strived to provide excellent care to their patients and were eager to implement best practices. Unfortunately, with limited EBP knowledge, practice changes were implemented without first taking a deeper dive into the quality of the evidence often resulting in failure. The nursing staff had no prior formalized EBP training or mentor support, heavy patient workloads, limited time, and limited access to full-text research articles which made it difficult for them to embark on this journey. The purpose of this project was to create a sustainable EBP structure for a rural healthcare organization that focused on education and mentoring of outpatient oncology staff nurses to support the timely translation of research into clinical practice. A pre-test, post-test quality improvement project was conducted to examine EBP outcomes associated with implementation of the Advancing Research and Clinical practice through close Collaboration (ARCC) model. A key strategy included four nurses, from leadership and direct patient care, attending a 5-day EBP workshop to be trained as EBP mentors. These EBP mentors then guided and mentored staff nurses through the process on three projects. A demographic questionnaire and three EBP shortened scales were used to measure oncology nurses' beliefs about the value of EBP, readiness to implement EBP, and organizational culture. Three EBP projects were implemented: (1) Dilution of IV push medications, (2) Use of alcohol impregnated caps in outpatient oncology, (3) Normal saline

versus heparin for subcutaneous port flush. Projects resulted in practice and organizational policy changes. Utilizing trained EBP mentors improved nurses' beliefs about EBP, readiness to implement EBP, and organizational culture as evidenced by increased staff scores on the post-test. Additionally, annual employee engagement scores increased by 15%. Timely translation of research into clinical practice through EBP is imperative for oncology nurses. Unique challenges exist in implementing EBP in rural hospitals due to limited availability of resources. Assessment for EBP barriers and mitigation of those barriers is essential. Strategies for successful implementation of EBP include mentorship development and structured EBP education for clinicians. The creation of an EBP infrastructure and culture is key in the cultivation of a spirit of inquiry and sustainment of EBP.

### **016 HYPERSENSITIVITY REACTION KIT: AN EFFICIENT TOOL FOR THE MANAGEMENT OF INFUSION-RELATED REACTIONS**

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Hypersensitivity reactions related to various cancer treatments, such as chemotherapy, immunotherapy, monoclonal antibodies, and iron infusion, are a rare but significant event. The Oncology Nursing Society recommends that emergency equipment and medications should be readily available for efficient management of infusion-related reactions. More than fifty percent of nurses in OPC21 Cancer Center Infusion believe that our current practice in managing hypersensitivity reactions is average and in need of improvement. Using an emergency toolbox enables quicker response in managing anticancer therapy-induced hypersensitivity reactions. OPC21 defines the efficiency rate as the time from the patient reports hypersensitivity reaction symptoms to the time the first rescue medication is given. It is identified that the mean efficiency rate of OPC21 from December 2020 to March 2021 is at 9.5 minutes. The purpose of this nurse-driven project is to examine the use of a hypersensitivity reaction kit in improving the efficiency in managing infusion-related reactions. Furthermore, the goal of the project is to improve the efficiency rate of OPC21 from 9.5 minutes to 5 minutes after three months of intervention. A nurse survey was also done to determine the nurses' perspective about the current practice in managing infusion-related reactions. April 2021: Results presentation and plan develop-

ment with leadership and OPC Pharmacy. Hypersensitivity reaction kit and process for utilization was developed (see diagram). OPC Pharmacy decided to arrange rescue medications in one bin inside the Pyxis for faster access. May 2021-August 2021: Staff education conducted about the process of using the hypersensitivity reaction kits. It is encouraged to keep the prepared hypersensitivity reaction kits at the chair-side of high-risk patients. Three-month Implementation phase started on the last week of May 2021, and data collected on a weekly basis. After three months of intervention, OPC21 has met the goal of improving the efficiency rate. The result shows that the use of a hypersensitivity reaction kit can improve efficiency and provide faster interventions for patients experiencing infusion-related reactions. Using a hypersensitivity reaction kit provides an efficiency rate of 2.6 minutes. This means that a hypersensitivity reaction kit can provide 57% faster interventions and quicker reversal of unwanted symptoms. Furthermore, this project signifies that utilization of hypersensitivity reaction kits in an outpatient setting can promote a safer environment for our patients.

### **017 PHAST AND FURIOUS: UTILIZING POINT OF CARE TESTING IN THE MANAGEMENT OF METHOTREXATE CLEARANCE**

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High dose methotrexate (HDMTX) is a chemotherapy that can cause significant toxicity, including acute kidney injury (AKI), by crystallizing in the renal tubules and delaying drug clearance. AKI can lead to increased morbidity, delays in treatment, and decreased renal function. Monitoring methotrexate (MTX) clearance is key to the prevention of AKI. Urine testing is used to ascertain pH levels to determine if sodium bicarbonate ( $\text{NaHCO}_3$ ) is needed to alkalinize the urine because methotrexate and its metabolites are more soluble at higher pH levels. Increased turnaround times (TAT) for urine samples sent to the lab caused delays in  $\text{NaHCO}_3$  adjustments, increasing MTX clearance times and lengths of stay. The purpose of this project was to improve adherence to the HDMTX clearance protocol by expediting urine pH results through on-unit point of care testing (POCT). A multidisciplinary taskforce, consisting of nurses, APPs, physicians, POCT staff, and Epic support col-

laborated to implement urine pH POCT on three oncology units at a large academic teaching hospital in New York City. Three Siemens Clinitek urine analyzers were purchased and data jacks were installed on each unit, allowing data collected by the analyzers to be transmitted to patients' electronic health records (EHR). The nursing quality team partnered with ordering providers and Epic support to create a new order specific to the point of care test. One hundred thirty-one nurses completed competency training on how to operate the analyzers. This project went live in August 2023, and our quality team will be collecting data on the time between urine pH results and  $\text{NaHCO}_3$  administration. Decreased TATs allow nurses to administer  $\text{NaHCO}_3$  in a timelier manner, which results in better management of MTX levels and toxicity. These improvements contribute to shorter lengths of stay and increase patient satisfaction. On-unit testing of urine pH eliminates the need for samples to be sent to the main lab, where TATs could be over an hour. POCT grants real-time results, allowing nurses to administer  $\text{NaHCO}_3$  more expeditiously, increasing adherence to the HDMTX clearance protocol and decreasing the potential for AKI. Decreasing the risk of AKI improves patient outcomes, satisfaction, and leads to decreased lengths of stay. Receiving continuous feedback from frontline nurses and tracking time from test result to  $\text{NaHCO}_3$  administration are keys to measuring the success of this project.

### **018 IMPLEMENTATION OF A CHART PREP POSITION AS A STRATEGY TO DECREASE PATIENT WAIT TIMES AND INCREASE PATIENT SATISFACTION**

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University of Miami Sylvester Comprehensive Cancer Center (SCCC) is a National Cancer Institute (NCI) designated cancer center located in South Florida with 14 individual infusion sites providing care throughout a bi-county area treating approximately 500 patients daily. Patients were consistently delayed upon arrival due to missing treatment prerequisites for their in-

fusion visit. This affected wait times and patient satisfaction scores negatively. The established role of a “Chart Prep” registered nurse with oncology infusion experience was created in an effort to increase patient satisfaction and expedite patient care, with chart review being done 48 prior to visit to identify and resolve barriers to care at the point of service prior to patient arrival. Created 9 “Chart Prep” positions that were filled with internal infusion nurses. Their role was established to perform a chart review that included review of scheduling accuracy related to time and any treatment administration restrictions, ensuring that supportive care required is scheduled, baseline and diagnostic tests are completed, signed consent, placement of lab orders, authorization verification, obtain signed infusion orders, reviewing provider last progress note for any changes in care, and performs pre-calls for new patients. Utilizing EPIC EHR functionality, communicates that the chart has been reviewed and all pending items resolved. In the 12 months pre implementation compared to 12 months post implementation of the “Chart Prep” role, patient wait times decreased from 25 minutes to 16 minutes, no show rate decreased from 6% to 5% and pre-call compliance increased from 85% to 94%. Press Ganey likelihood to recommend mean score increased from 95.59 to 96.69 resulting in a 41% increase in national benchmark rank. These improvements were achieved while increasing volumes by 13% from an average of 9317 encounters to 10,505, monthly. With the documented success of the process, this became our standard of care. Opening our newest site in September of 2023, “Chart Prep” was in place helping to facilitate patient care from inception. While this position is not patient facing, this has added value in that it facilitated increased capacity by reducing no shows and optimizing efficiencies in patient throughput. Partnering chart prep with scheduling optimized infusion times and maximized capacity. This is a primarily remote position improving nursing satisfaction while coming onsite to assist to cover staff shortages thus maintaining clinical skills.

### **019 IMPROVING ACCESS TO FERTILITY PRESERVATION SERVICES AMONG ADULTS DIAGNOSED WITH CANCER**

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Approximately 87,500 individuals 15-39 years of age were diagnosed with cancer in 2022. Onco-fertility

is an emerging discipline that provides a multidisciplinary approach to cancer treatment that incorporates family planning. National leaders in oncology care recommend fertility preservation counseling and referral for those interested in having biological children. Patients and clinicians may not have knowledge regarding the impact on fertility posed by cancer treatments. The threat to fertility causes major distress to individuals diagnosed with cancer as they face a new diagnosis, endure toxic treatments and navigate survivorship. There was a need to expand Onco-fertility resources for young adults, improve provider comfort with the topic, and increase the quality and quantity of referrals to reproductive services. This project questioned whether adults ages 15-39, who require systemic cancer treatment, have increased access to Onco-fertility resources after the implementation of a streamlined referral system, increased oncology provider education, and with the guidance of a trained nurse navigator. An implementation tool was used to disseminate knowledge to physicians, advanced practice providers, nurse navigators, and chemotherapy educators. One-on-one in-services were completed and revisited to reinforce the new referral pathway, expedite referrals, discuss available health system resources, documentation and to gather feedback. Between July and December 2022, demographics, diagnosis, notes and referral orders were gathered from the electronic health record (EHR), securely stored, and used to calculate a score that reflects the quality of each referral. The scoring was based on the timeliness of the referral, elements that provide information about the chemotherapy regimens and/or surgery, and documentation within the EHR of a conversation regarding interest in family planning. Prior to implementation, there was a 28.58% patient referral rate, 50% of the referrals included the required documentation of fertility preservation counseling, and the total referral quality score was 1.57. Post implementation there was a 40% referral rate, 100% documentation rate, and the referral quality score increased to 2.9. This Quality Improvement (QI) initiative identified a gap in supportive oncologic and survivorship services and increased the quality of care by meeting the current clinical guidelines, providing patient support, and streamlining communications. Future work will continue to sustain improvement of this important survivorship topic, reduce biases regarding fertility preservation conversations, and empower oncology clinicians to speak confidently on the topic of reproductive health.

## 020

### NAVIGATING TOWARD A SUCCESSFUL LUNG SCREENING PROGRAM

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National lung cancer statistics remain grim (2nd most common cancer, leading cause of cancer death). Low-dose CT scans (LDCTs) can detect early-stage lung cancers with curative treatment options. LDCT screening recommendations started in 2013; however, only 5.8% of high-risk individuals participate. Barriers include lack of awareness, scheduling, and ineffective care coordination. Oncology nurse navigators (ONNs) are integral members of lung screening programs and well-positioned to address these factors. The purpose is to highlight the valuable ONN role contributing to growth and success of lung cancer screening programs. Our oncology program leveraged the ONN role through outreach, scheduling, and care coordination. The ONN organized events during Lung Cancer Awareness Month to increase screening awareness. She developed marketing materials, delivered materials to local providers, and targeted providers in rural areas with limited screening access. Grand rounds and tumor board conferences were used to disseminate LDCT information. The ONN created a standardized order form to avoid scheduling delays from incomplete orders. Upgrading to a cloud-based fax system allowed the ONN to electronically route orders to schedulers immediately after reviewing eligibility. She served as the primary contact for patients/providers, answering questions regarding LDCT orders, cost, and risks/benefits. The ONN worked closely with a physician champion, establishing monthly multidisciplinary conferences to discuss positive screenings (Lung-RADS categories 3 and 4). The ONN prepared conference lists and communicated follow-up recommendations to patients/providers. She sent annual screening reminders to LDCT patients. Since 2015, LDCTs detected 14 cancers; seven were early-stage lung cancers and resected for curative intent. Screening rates rose from an average of six patients monthly to 20. The largest annual increase (83%) occurred after focusing efforts to close screening gaps due to COVID-19, with sustained growth (34%) the following year. Additionally, the ONN established her consultant role with administrators, serving as an advisor for new diagnostic technology. A rural hospital contacted her for guidance in establishing a screening

program. Integrating an ONN into our lung screening program proved to be an effective growth strategy. We are expanding our program to include incidental pulmonary nodule (IPN) findings (nodules detected when imaging is performed for other reasons). ONN involvement in these dual pathways (LDCT and IPN) can significantly improve early detection whereby impacting lung cancer survival.

## 021

### BEYOND THE BELL: CREATING AN INCLUSIVE OPPORTUNITY TO CELEBRATE CANCER TREATMENT MILESTONES

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Over the years, patients frequently inquire about the “bell ringing” ceremony they can expect upon cancer treatment completion. Many of the them have been understanding about the lack of a bell, knowing not all patients treated in the infusion center are fighting towards a cure, but are disappointed at the same time. The infusion nurses looked inward at ideas that would provide patients, regardless of curative versus palliative treatment intent, an opportunity to commemorate their journeys. The purpose was to create an opportunity for all cancer patients to commemorate their journeys in a manner that will not be a negative experience for other patients in the area, who may never celebrate their “last chemo infusion.” A literature search was conducted on various forms of end-of-treatment celebrations. Evidence suggested that while ringing a bell was a symbolic form of the end of a long journey for some, it was also a reminder to others that they would never have an opportunity to “ring the bell.” Following the literature search and continued discussion amongst the infusion staff, the decision to create an inclusive commemoration of cancer patient’s journeys was made. A custom wall graphic with an inspirational quote was created and hung in a low-traffic hallway, giving patients a private opportunity to take their picture at any point during their cancer journey, with any caregiver or support person they wanted to have join the photo-op. A variety of photo prop signs were designed, sprinkled with inspirational sayings, keeping in mind all patients that are served in the infusion center. A polaroid camera was purchased to capture the intimate moments, serving as a memento that could be taken home. Certificates

with an inspirational quote were created for the patients who have completed their full cancer treatment, providing an opportunity for staff to sign and congratulate them on their milestone. Patients and family members have expressed gratitude towards the staff. Many have asked nurses and techs to join them in their photo ops. Patients who do not care to take photos are appreciative of the thoughtful certificate they receive. By having options to honor all patients during their journeys, staff feel more fulfilled, excited to share in the moments with their patients.

## 022 REFERRAL TO EXERCISE PROGRAM IN AMBULATORY GENITOURINARY ONCOLOGY PATIENTS

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Evidence-based research (EBR) supports exercise as an intervention in the oncology population (Campbell et al 2019; Ligibel et al 2022). Exercise can decrease anxiety, depression, cancer-related fatigue and increase quality of life and physical functioning. Exercise has been found to be safe and effective for multiple cancer diagnoses, including genitourinary cancer. Despite EBR related to exercise benefits for individuals with / at risk for cancer, lack of time, education, and resources are barriers to referrals (Ligibel et al 2019). Oncology Nurse Navigators (ONN) are strategically placed for process and quality improvement (QI) as they are often the first line of contact for patients. The ONN team may provide an effective pathway to aid in the translation of exercise oncology research through patient education, proper assessment, and referrals to appropriate professionals. At our NCI-designated comprehensive cancer center, among 5,912 unique patients eligible for exercise referral between June 1st and December 2nd 2022, only twelve patients were referred. The purpose of this QI project was to assess and address ONN barriers related to exercise education and program referrals to an integrative oncology exercise program within the genitourinary oncology population. This QI project was developed as part of the Clinical Process Improvement Leadership Program (Rao et.al, 2017). A convenience sample of GU ONN team members was evaluated. A process map was created to identify opportunities for education and referrals for exercise. A driver diagram, including impact was developed. The ONN team completed an electronic survey of barriers to placing referral for exercise program. Based on fea-

sibility and potential impact, two interventions were implemented. ONNs received an electronic bundle of existing patient education sheets and met with exercise program staff to review referral process. Number of referrals from GU ONNs to internal exercise program increased the number of referrals from 0 to 1 per week. To date, this has been sustained. The number of referrals to the internal exercise program improved for patients with GU cancer. There is an opportunity for this program to expand to multiple disease centers within the cancer center. A patient satisfaction survey to understand the patients' perspectives would be valuable. Additionally identifying the best timing of referral for ONN to refer impacts utilization of exercise programs and benefits is warranted.

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## RADIATION

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### 01 INTERVENTIONS FOR RADIATION-INDUCED DIARRHEA: PUTTING EVIDENCE INTO PRACTICE

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Radiation therapy is a common treatment for cancers of the abdomen and pelvis with the potential to cause diarrhea as both an acute and late gastrointestinal toxicity. Despite advances to limit radiation exposure in healthy tissue, diarrhea remains a distressing associated side effect of radiation and warrants evidence-based intervention measures. The purpose was to update the recommendations likely to be effective in the treatment and prevention of radiation-induced diarrhea (RID). A group of oncology nurses, advanced-practice nurses, and nurse scientists conducted an exhaustive search of research literature and critically appraised the evidence. Studies measuring outcomes of interventions aimed at diarrhea prevention and management, systematic reviews, and

clinical practice guidelines were searched in three databases: PubMed, CINAHL, and Cochrane from 2016-2023. Title and abstract screening were performed independently by two reviewers, with full-text screening completed by a single reviewer. Paired reviewers completed quality assessment and data extraction. Results were evaluated and categorized with standard weight of evidence categories considering quality, level of evidence, magnitude of outcome, and agreement across the evidence. A total of 8971 references were initially retrieved. After screening for duplicates and exclusion criteria, 89 studies were moved to full-text screening. A total of 54 studies were included in this review; 16 reported specifically on RID management. Few interventions related to nutritional supplementation were found; however, primary studies, systematic reviews, and clinical practice guidelines consistently reported on the effects of probiotic use on diarrhea during and after radiation treatment. Radiation to the abdomen and pelvis can cause imbalances in gut microbiota, disrupt gut mucosal barrier, and increase intestinal permeability and inflammation. Multiple systematic reviews reported reduced incidence of RID with probiotic use compared to control groups in limited populations. There was heterogeneity between studies related to probiotic strain, dosage, and timing of use. Findings on the efficacy of probiotics were mixed when used during chemoradiation treatment. Minimal to no adverse events were reported with probiotic use. Diarrhea is a distressing side effect of cancer-related treatment negatively impacting patient quality of life. Emerging evidence suggests a benefit to probiotic use during radiation therapy to reduce incidence of diarrhea. This low-risk evidence-based intervention can be considered in combination with clinician expertise and patient preferences. Oncology nurses are essential in advising patients on evidence-based interventions to mitigate RID.

## **02 REDUCING RADIATION TREATMENT DELAYS IN PROSTATE AND GYNECOLOGIC PELVIC PATIENTS**

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In Radiation Oncology when treating Prostate and Gynecologic (GYN) Pelvic patients, if they present

for their simulation and treatment with excess gas and stool in their rectum, it can prevent the radiation therapists from accurately imaging the patient and ensuring consistent reproducibility of set up and accurate treatment. This causes delays when issues are found that require the patient to be taken off the treatment table to expel gas or have a bowel movement. Multiple Radiation Oncology Departments within a healthcare system obtained 3 months of baseline data which identified trends in Prostate and GYN Pelvic patients having bowel prep issues and frequently being taken off the treatment table. The team sought to identify ways to reduce incidences of excess gas and stool present to improve patient reproducibility of set up to ensure accurate Radiation treatment and less interruptions in care. A multidisciplinary team consisting of physicians, nurses, therapists and dietitians developed an Educational Booklet for patients outlining both dietary and medication standardized instructions to follow when receiving Pelvic Radiation therapy. The content was created based on a literature search of best practices in radiation. Instructions are individualized based on treatment type and patient's bowel and dietary history. The booklet is provided to patients on the day of consult and reinforced before their simulation. Patients are referred to the Oncology Dietitian if needed for additional support and follow up is provided by the therapists daily and nurses and physicians at weekly on treatment visits. Post implementation data was collected at each Radiation site for 3 months to determine if based on the use of standardized dietary and medication interventions there is improvement in bowel issues and/or interruptions in treatment. To date, the results have demonstrated an overall improvement of 33% less bowel prep issues and greater than 50% improvement in treatment interruptions and delays. Data will be collected for another 2 months to note any additional improvements.

**Discussion –** It is crucial to continue to identify methods to improve Radiation patient treatment processes to enhance accuracy of treatment and prevent treatment delays. This standardized approach outlined in the educational booklet can be easily used at other Radiation sites to improve patient experiences and enhance patient care.

## **03 DEVELOPMENT OF NURSING PROCESS FOR INTEGRATION OF MEPITEL FILM FOR PRE- VENTION OF RADIATION DERMATITIS**

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Radiation therapy (RT) is often a necessary treatment for breast cancer patients in the post mastectomy setting to reduce the risk of locoregional recurrence. Radiation dermatitis (RD) is an expected acute side effect. Symptoms of RD include erythema, hyperpigmentation, pruritis, edema, pain, and desquamation. RD can significantly impact patients' quality of life and may influence a patient's decision to pursue recommended therapy. Moderate to severe RD may also lead to a higher risk for infection and complications with breast reconstruction. There are limited evidence-based interventions for prevention of radiation dermatitis. A previously completed pilot study showed positive results using Mepitel Film for reducing the risk of RD in Post Mastectomy Radiation Therapy (PMRT) patients. While Mepitel Film may reduce incidence of RD, barriers to access and application support have led to limited widespread adoption. Nursing identified a need to establish a standardized workflow for patient selection and provide education for patients and staff. The purpose was to develop and implement a nursing process for Mepitel Film utilization as the standard of practice for RD prevention in PMRT patients. A nurse visit on the day of treatment planning was added to discuss using Mepitel Film, ensuring a consistent process to educate PMRT patients. For patients using Mepitel Film, weekly checks were performed during scheduled on-treatment visits. Supplemental visits for patching and application were added at the patient request. Based on best practices identified during initial use, Nursing from across multiple practice sites within the institution developed a patient education handout that included definition of product, required preparation, care of film during use, side effects and instructions on purchasing the product. After establishment of application guidelines, Nursing developed a video demonstrating application and practice tips for staff. Successful implementation of the workflow and education resulted in use of Mepitel Film for approximately 80% of PMRT patients. Over the span of 9 years, we estimate that we have treated approximately 780 patients with the use of Mepitel Film. Mepitel Film is an effective product in reducing RD, infection, and reconstructive surgery complications in PMRT patients. Nursing involvement in implementation of evidence-based practice change is vital for successful adoption into practice. Nursing ownership in the development of

the workflows, protocols and education has led to the widespread adoption of Mepitel Film as standard of practice.

#### **04 CREATION OF NURSE-DRIVEN RISK STRATIFICATION PROTOCOL FOR MODERATE SEDATION IN RADIATION ONCOLOGY**

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Moderate sedation is being administered frequently by registered nurses in Radiation Oncology, including during procedures such as prostate hydrogel insertion, brachytherapy or to help minimize anxiety or pain during external beam radiation treatments. While a significant amount of guidance exists on how to administer moderate sedation to patients, there is very little guidance or resources available regarding selection of appropriate patients to receive sedation based on risk stratification. This places nurses in the position of potentially delivering sedation to patients that may be at increased risk for adverse events, or refusing to give sedation and risking patient procedure cancellation. Radiation Oncologists order moderate sedation for procedures, but often are not reviewing candidacy to receive outpatient sedation at the time of this request. Historically, no advanced screening process for moderate sedation candidacy has been utilized. There is no official recommendations documented in the literature. Patients often risk same-day cancellation for sedation if concerns arise while clinical team is preparing the patient for their procedure. This can lead to financial loss from procedure cancellation and travel-related costs, unnecessary anticoagulation holds and bowel preparations, and decreased trust and satisfaction from patients. The goal of our intervention was to develop a risk-stratification screening protocol for all patients needing sedation in Radiation Oncology, to be done in advance of day of procedure, to ensure safe and organized moderate sedation was being delivered every time. All physicians in Radiation Oncology received training from nursing on development of this safety protocol and agreed to notify nursing leadership when they identified a patient needing sedation. This early identification allowed time for advanced screening and care planning, which was driven by nursing. We created a one-page screening tool for moderate sedation. We adopted some of the screening criteria used by the American Society of Anesthesiologists for anesthesia risk

stratification, as well as guidance from AORN on safety considerations. We also added a few other exclusion criteria we felt met our departments desired safety goals. This project received immediate acceptance by the department and our team has had no cancellations related to patient candidacy since we started using this protocol four years ago. Administration of moderate sedation can be simple and organized. Advanced screening is imperative for safety, cost effectiveness and patient and staff satisfaction.

## **05 IMPLEMENTATION OF CARE ALERTS TO PRO- ACTIVELY IDENTIFY RADIATION ONCOLOGY PATIENTS WITH UNCONTROLLED SYMPTOMS**

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Stereotactic body radiotherapy (SBRT) is a form of radiation that enables delivery of higher doses with enhanced precision. SBRT has demonstrated efficacy and benefit in treating brain and spinal cancer metastasis. Although SBRT offers a more precise treatment modality, patients undergoing this treatment still face several challenges including longer treatment times, intolerance of the treatment mask fastened to the table, and difficulty managing concurrent cancer-related symptoms such as nausea, pain, and anxiety. If these symptoms are not proactively managed prior to treatment day, this results in disruption of care impacting other patients and workflows. The purpose was to decrease treatment delays and improve department efficiency, a pilot study was conducted to identify patients prior to treatment with unresolved symptoms of nausea, pain, or anxiety. Symptoms were identified at consult or simulation. The treatment team created a plan to address the issue prior to day one of treatment. Preliminary data collection performed from 3/6/2022 to 6/9/2022 revealed treatment delays related to nausea, pain and anxiety were most common. An alert labeled “Treatment Tolerance Risk” was built in MOSAIQ®, a radiation oncology specific electronic medical record. All clinical teams, consisting of radiation oncologists, nurses, residents, and therapists, received education about the alert purpose and workflow. If symptoms were noted at consult time, or a patient had difficulty tolerating simulation, staff placed an alert and notified associated providers, including the CyberKnife therapy team. A management plan was established and added to a “comment” section in the alert that included supportive care treatment sug-

gestions. This was then communicated to the patient. Additionally, the patient was reminded of the planned interventions 1-3 days prior to treatment during their routine pre-treatment call with the CyberKnife team. Evaluation: Baseline data collection identified 18.84% patient delays due to nausea, pain, or anxiety. Following implementation of the intervention from 3/6/2023 to 6/6/2023 patient treatment delays were reduced to 2.35%. Implementation of infrastructure and workflow aimed to support early identification of uncontrolled symptoms and other barriers to treatment proved to be effective in reducing patient delays. Because of the success of this pilot, additional alerts, such as MRI alert, have been created to promote quality and safety for patients undergoing treatment across the department and will be the subject of future manuscripts.

## **06 IMPROVING DATA CAPTURE RATES OF NURSING METRICS AND STREAMLINING QUALITY DATA REPORTING IN RADIATION ONCOLOGY**

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Nursing metrics are used to capture the nursing care provided to patients and the impact of that care on patient outcomes. In 2021 we performed a gap analysis to assess barriers to the successful capture of this data for our radiation oncology service line. Findings showed multiple flowsheets were being used to document nursing metrics, and these metrics were not accurately captured due to inappropriate documentation. This created confusion for nursing and providers and caused inefficient workflows. The purpose was to create a comprehensive dashboard that accurately captures and reflects the key nursing metrics in our radiation oncology center. Nursing managers partnered with our frontline staff to identify critical quality and best practice performance measures. The measures identified were pain scores, fall screening, patient education, discharge instructions, and post treatment phone calls. We collaborated with our Information Technology analysts and Medical Record analysts to optimize functionality to populate and/or create reports and progress notes. We consolidated multiple nursing flowsheets into one and re-educated the nurses on documentation. We created both a scheduling process for post treatment phone calls and a report to track compliance. Regular audits were conducted, and data shared with staff at

departmental meetings. Pre and post intervention data for each metric was analyzed from 2021-2023. Patient education improved 10 % overall from 86% pre to 96% post; discharge instruction improved 30% from 61% to 91%, post treatment phone calls improved 80% from 15% to 95%; pain assessment already high improved 7.4% from 91% to 98.5%; and fall screening improved 12.9% from 85.7% to 98.6%. Through this work we were able to identify and capture critical quality care measures. We consolidated multiple nursing flowsheets into one and created a new workflow and report for post treatment calls. The comprehensive dashboard allows leadership to follow and track practice. With this information we can share performance with staff and correct in real time any variances. As a result of these efforts, our data reporting has increased over all since 2021, and we have consistently met and exceeded and our goal of 90% for all metrics.

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## RESEARCH

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### 01 SOCIAL FUNCTIONING DISPARITIES BY RACE AND ETHNICITY AMONG HEAD AND NECK CANCER SURVIVORS

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Prior studies have established head and neck cancer (HNC) patients from minoritized racial and ethnic groups, have lower quality of life compared to white HNC patients. However, disparities within a certain dimension of quality of life, social functioning, is unknown. Social functioning has a profound impact on HNC patients, who often experience disfigurement to the face or neck or speech impairment due to cancer treatment. The American Cancer Society Integrated Conceptual Framework for Understanding and Addressing Social Determinants to Advance Cancer Health Equity posits that adverse social determinants (e.g., racism, insurance) contribute to cancer disparities. Aligned with the ONS key priority area II, identifying social functioning disparities by race and will inform design and testing of multi-level interventions that target social determinants of health (e.g., racism) to promote health equity. The aim of

this study was to investigate social functioning disparities in HNC patients by race/ethnicity. To achieve this aim, we conducted a secondary data analysis with the NCI 1989-2019 SEER-MHOS dataset. We obtained descriptive statistics and conducted ANOVAs with posthoc Tukey test to investigate social functioning differences between racial/ethnic groups. Our sample included 5,589 patients with a HNC diagnosis. We found Black (mean=41.23, SE= 0.70, difference= 8.5%), American Indian or Alaskan Native (mean=36.28, SE= 2.69, difference= 19.5%), Asian or Pacific Islander (mean=36.28, SE=0.73, difference=6.7%) HNC patients had significantly worse social functioning compared to White HNC patients (mean=45.07, SE=0.20, p for all <0.001). Our findings suggests that racial and ethnically minoritized HNC patients experience the worst social functioning outcomes. These disparities are likely contributed to by adverse social determinants such as systematic racism. Future research is needed to develop tailored interventions targeting social functioning among HNC patients from minoritized racial and ethnic groups to promote health equity.

### 02 “MY SENSE OF JOY, AND MY FULFILLMENT”: NURSES, PHYSICAL THERAPISTS, AND OCCUPATIONAL THERAPISTS’ ACCEPTABILITY OF THE PALLIATIVE AND SUPPORTIVE CARE INTERVENTION (PACT) FOR OLDER ADULTS WITH ACUTE MYELOID LEUKEMIA AND THEIR CARE PARTNERS

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There are limited studies examining clinician acceptability of palliative and supportive oncology care interventions. An understanding of intervention’s acceptability is necessary to ensure fidelity, efficacy, and sustainability. The purpose was to explore clinicians’ perspectives on the Palliative and Supportive Care intervention (PACT). PACT is an ongoing NIH-funded palliative and supportive care intervention designed to improve quality of life for older adults (≥60) with

acute myeloid leukemia (AML) and their care partners. Semi-structured qualitative interviews were conducted with eight clinician interventionists in the PACT study, including occupational therapists, physical therapists, and registered nurses. Interviews were conducted by researchers not involved with the intervention's design and delivery. Interviews were audio-recorded and Dedoose software was used for analysis. Thematic analysis was conducted to determine major themes, and the seven domains of the Theoretical Framework of Acceptability guided the qualitative analysis. We identified five major themes: 1) Emotions and affect towards the intervention, 2) Intervention coherence and self-efficacy, 3) Barriers, burden, and opportunity costs of delivering the intervention, 4) Usefulness and effectiveness of the intervention and 5) Recommendations to improve intervention delivery. Clinicians all found the PACT intervention to be highly acceptable. Clinicians highlighted positive aspects of the intervention including teamwork, improved job satisfaction, and fulfillment working with cancer patients and their care partners. Recommendations for improvement included better integration of palliative care interventions within the larger healthcare system, such as gaining organizational buy-in. Future palliative and supportive care interventions may apply these findings to support clinicians working in healthcare organizations to improve efficacy and sustainability. This study offers an innovative approach for researchers and clinicians to work collaboratively to develop and improve palliative care interventions in clinical settings.

### 03 PSYCHOLOGICAL SYMPTOM CLUSTER SEVERITY PROFILES ARE ASSOCIATED WITH HIGHER LEVELS OF STRESS AND WORSE QUALITY OF LIFE IN POSTMENOPAUSAL WOMEN WITH BREAST CANCER

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While the psychological symptom cluster (PSC) is common in patients receiving cancer treatment, the life stressors (e.g., traumatic experiences) and social stressors (e.g., socioeconomic deprivation) that influence its severity prior to and throughout aromatase inhibitor treatment are not fully understood. In addition, the influence of the PSC on quality of life

outcomes remains poorly characterized. Study purposes were to identify subgroups of postmenopausal women with breast cancer with distinct PSC severity profiles prior to (T1) and six months following (T2) the start of aromatase inhibitor therapy and evaluate whether these subgroups differed in terms of clinical and sociodemographic characteristics, posttraumatic stress, and quality of life. Postmenopausal women with early-stage hormone-receptor positive breast cancer (n=159) were recruited following breast surgery. At T1 (n=159) and T2 (n=129), women completed assessments of symptom severity (i.e., Beck Depression Inventory-II, Pittsburgh Sleep Quality Index, Patient-Reported Outcomes Measurement Information System Emotional Distress-Anxiety and Fatigue Short Forms, Patient Assessment of Own Functioning), area deprivation (i.e., area deprivation index), posttraumatic stress (i.e., PTSD Checklist for DSM-5), and quality of life (i.e., Medical Outcomes Study - Short Form 36 Health Survey). Latent profile analysis was used to identify subgroups of women based on the severity of a pre-specified PSC (anxiety, depression, fatigue, sleep disturbance) separately at T1 and T2. Parametric and non-parametric tests were used to evaluate for differences among the subgroups. Three distinct PSC severity subgroups were identified at T1 (i.e., Low (71.7%), Moderate (23.9%), High (4.4%)) and two at T2 (i.e., Low (80.6%), High (19.4%)). At T1, no differences were identified in clinical or sociodemographic characteristics among the PSC severity subgroups. At T2, compared to the Low subgroup, patients in the High subgroup were younger and were more likely to have previously received chemotherapy. At both timepoints, compared to the Low subgroup, women in the Moderate and High subgroups had significantly worse perceived cognitive function, higher PTSD total scores, and lower levels of quality of life on multiple subscales (i.e., mental health, role emotional, social functioning, vitality). Our findings suggest that stressful life experiences are associated with the severity of a PSC prior to and six months following aromatase inhibitor therapy. Given the negative impact of this cluster on quality of life, additional research is needed to develop and test interventions to target this cluster.

### 04 A COMPARISON OF IN PERSON AND TELEHEALTH PERSONALIZED EXERCISE PROGRAM FOR CANCER SURVIVORS: PILOT STUDY

Hejingzi (Monica) Jia, RD, Johns Hopkins University

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Cancer survivors suffer from multiple symptoms, including fatigue, pain, insomnia symptoms, and cognitive dysfunction. Exercise, especially a personalized program, may relieve symptoms and improve overall well-being. While many personalized exercise interventions were face-to-face, most interventions transitioned to telehealth visits during the COVID-19 pandemic. Further studies are needed to determine the efficacy of virtual interventions in comparison to in-person ones. This study compares the effect of a telehealth personalized exercise program on fatigue, pain, cognitive function, insomnia, self-efficacy, and well-being compared to an in-person personalized exercise program. A secondary data analysis was conducted on two 12-week randomized control pilot studies (JHM-IRB00154198 and IRB00175781) for solid tumor cancer survivors. The first study involved face-to-face home visits with phone follow-ups for exercise recommendations. The second employed a completely virtual approach and weekly exercise recommendations via a smartphone app. Symptoms (e.g., fatigue, pain, cognitive function, and sleep), self-efficacy, and well-being were measured at baseline and completion of the 12-week program. Analysis using SPSS involved a paired t-test for intervention effects and ANCOVA for group differences, adjusting for age. A total of 75 participants who completed the program were included in this analysis. Fifteen participants received in-person personalized exercise, 39 were in telehealth personalized exercise, and 21 were in usual care control. After 12 weeks, No significant differences in symptoms at program completion compared to baseline between the face-to-face and telehealth groups. The study supports the effectiveness of personalized exercise programs on fatigue and sleep. Additionally, the findings suggest the effectiveness of this program on symptoms was compatible between in-person and telehealth visits. Healthcare providers should consider telehealth-based interventions as viable alternatives to in-person visits, especially when

direct interactions are challenging. Despite these strengths, this study is limited by its small sample size, which can constrain the generalization of the findings. It is essential to conduct further research with a larger cohort to ascertain the long-term effects.

## **05 FINANCIAL TOXICITY, COPING STRATEGIES, AND PSYCHONEUROLOGICAL SYMPTOMS IN ADULT SURVIVORS OF CHRONIC MYELOID LEUKEMIA: A STRUCTURE EQUATION MODEL ANALYSIS**

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Financial toxicity (FT) is a pressing concern for chronic myeloid leukemia (CML) survivors, for whom medication and out-of-pocket (OOP) costs can be exorbitant, aggravating the burden of psychoneurological symptoms (PNS). Coping strategies are potential mediators for the relationship between FT and PNS. The purpose was to identify pathways between FT, coping strategies, and PNS based on an adapted FT theoretical model. Using the baseline data from the parent study (a longitudinal survey of CML survivors' adherence to tyrosine kinase inhibitors), we test the relationships between costs, coping, and PNS using structural equation modeling (SEM). Self-reported instruments, such as sociodemographic questionnaire, COmprehensive Score for Financial Toxicity, Collection of Indirect and Non-medical Direct Costs Form, Medical Expenditure Panel Survey Household Component, and Patient-Reported Outcomes version of the Common Terminology Criteria for Adverse Events were used to measure participants' characteristics and the FT theoretical constructs, including FT, OOP costs, coping strategies (financial sacrifice, borrowing money/bankruptcy, and nonadherence), and PNS (pain, fatigue, anxiety, insomnia, and concentration). Data were analyzed using SPSS 29.0 and the lavaan packages in R 4.2.1. Participants (N=123) were middle-aged (49±15.4 years), balanced in sex (48.8% female), and diverse in race (43.1% non-white). Majority had private health insurance (71.5%)

and at least a bachelor's degree in education (74.8%). Nearly half (41.5%) reported difficulty paying for basic needs. Following measurement model refinement, an SEM (Figure 1) linking FT, OOP costs, coping strategies, and PNS demonstrated a modest fit:  $\chi^2=38.42$ ,  $p>0.05$ ; Tucker-Lewis index=0.91, comparative fit index=0.92, standardized root mean residual =0.04, root-mean-square error of approximation=0.10. Higher FT is associated with PNS; coping strategies mediated the relationship between FT (standardized path coefficient=-0.88) and PNS (standardized path coefficient=0.24), with OOP costs as the covariate. Our findings support pathways between FT, coping strategies, and PNS, partially validating the hypothesized FT theoretical model but further investigation is needed to explicate the effects of different coping strategies on PNS. These study results contribute to the understanding of patients' modifiable coping strategies for FT and helps build knowledge that will enhance risk assessment and inform intervention development for cancer patients experiencing FT. This study is innovative in providing theoretical and empirical evidence-based support for better understanding of FT pathways and designing interventions to mitigate FT.

## 06 ASSOCIATIONS BETWEEN COMORBIDITIES CLUSTERS AND CHEMOTHERAPY OUT- COMES IN INDIVIDUALS WITH LUNG CANCER

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The geographical areas of the United States where lung cancer is most diagnosed are also those with the highest rates of chronic disease, including cardiovascular disease and diabetes. Little is known about the effect of cumulative comorbid conditions and lung cancer outcomes. The purpose was to create comorbidity clusters and to analyze how these clusters influence chemotherapy outcomes. Data on patients with a lung cancer diagnosis were extracted from electronic health records. Finite mixture models using presence of the 16 comorbidities in the NCI lung cancer comorbidity index were built to segment the patient population into clusters. Within the subset of patients who received chemotherapy, generalized linear models were used to test for cluster differences in days from diagnosis to initiating chemotherapy (log-normal), total lines of chemotherapy (Poisson), total days on chemotherapy (zero-inflated negative binomial). A

Cox proportional hazards model was built for the days from chemotherapy end to death. All models were adjusted for age at diagnosis, sex, and disease stage. In a sample of 1814 patients, three distinct cumulative comorbidity clusters were found: mild (n=250), moderate (n=1132), and severe (n=432). 883 (48.7%) received chemotherapy and were in the analytic dataset. The average age was 66 (range, 59-73) and 52% were diagnosed with stage 4 disease. The mild cluster showed a longer time between diagnosis and initiating chemotherapy than the moderate cluster (fold change=1.40;  $p=0.010$ ), but did not differ from the severe cluster (fold change=1.22;  $p=0.339$ ). The severe cluster died post chemotherapy at approximately twice the rate of the mild cluster (HR=1.95;  $pTukey<0.001$ ) and 40% faster than moderate (HR=1.40;  $pTukey=0.007$ ). Time to initiation of chemotherapy between the mild and severe cumulative comorbidity group was similar, yet the severe group died at significantly higher rates. Across cumulative comorbidity clusters, results suggest a singular approach to decision making about the receipt and time to initiation of chemotherapy may not be equally beneficial. To advance precision medicine, cumulative comorbidities should be considered. A deeper understanding of cumulative comorbidity clusters in relation to treatment and end of life will aid oncology nurses in both patient education about comorbidity clusters and symptom management approaches. Further research is needed to develop decision making aids that consider cumulative comorbidity clusters, treatment, and survival outcomes.

## 07 EXPLORING THE EXPERIENCES OF CARE PARTNERS CO-SURVIVING IN THE CONTEXT OF LIVING WITH METASTATIC BREAST CAN- CER

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Nearly 170,000 women in the United States are living with Stage IV metastatic breast cancer (MBC). Improved MBC treatments have resulted in unprecedented years of survival, and a 31% increase in women living with chronic MBC. These successes create

challenges for women and families now dealing with extended prognostic uncertainty. Research shows that caregivers of women with breast cancer often bear a greater psychosocial burden than survivors and that dyadic psychosocial adjustment is important to the quality of life of both survivors and care partners. Few studies, however, have included dyads living with MBC, and far fewer studies tell the story of care partners in the new era of living with chronic MBC. This knowledge is important to oncology nurses who play a vital role in supporting the quality of life of families throughout cancer survivorship. Within our team's larger study exploring the context within which women with MBC and their care partners make treatment decisions, this analysis focused on the perceptions, behaviors, and coping strategies of care partners of women living with MBC. Understanding the psychosocial and behavioral experience of care partners will allow for development of appropriately targeted nursing interventions. Participants were recruited through oncologists, flyers, and Facebook. Semi-structured interviews were conducted via Zoom, phone, or in-person. Women and care partners were interviewed together or independently. Eligible care partners included spouse/partners, family members, or friends who identified as primary confidantes/supporters of women living with MBC. Ongoing qualitative, conventional content analysis of transcribed interviews was conducted independently and then jointly by team members. Twelve care partners (6 husbands, 2 daughters, 1 sister, 3 parents) were interviewed with 9 of the 30 total women enrolled. Women and care partners were living with MBC for <1 to 5 years (median = 2 years). Partners' age ranged from 29 to 75 years (median = 52 years). Care partners described "Becoming a Co-Survivor of MBC," exemplified by five interrelated themes: Meeting New Challenges, Changing Supportive Role, Navigating Decisions, Emotional Toll, Coping and 20 subthemes. These results contribute to the limited data on care partners' psychosocial and behavioral experience in the context of chronic MBC. Our findings will aid practicing oncology nurses to recognize the unique challenges of MBC care partners and inform research on interventions to support the wellbeing of this growing population.

## 08 CONSISTENCY AND STABILITY OF SYMPTOM CLUSTERS IN YOUNGER VERSUS OLDER PATIENTS RECEIVING CHEMOTHERAPY

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By 2035, the number of newly diagnosed cancer cases will double. Over 50% of these cases will be in older adults. Given this rapidly growing demographic, a need exists to understand how age influences oncology patients' symptom burden. Study purposes were to evaluate for differences in the occurrence, severity, and distress of 38 symptoms in younger (<60 years) versus older (≥60 years) patients undergoing chemotherapy and to evaluate for differences in the stability and consistency of symptom clusters across the two age groups. We hypothesized that older patients would have lower symptom occurrence, severity, and distress ratings and that common and distinct symptom clusters would be identified between the two age groups. A total of 1329 patients were dichotomized into the younger and older groups. Patients completed demographic and clinical questionnaires prior to the initiation of their second or third cycle of chemotherapy (i.e., enrollment). A modified version of the 32-item Memorial Assessment Scale was used to evaluate the occurrence, severity, and distress of 38 common symptoms associated with cancer and its treatment. Differences between the two age groups in terms of demographic and clinical characteristics, as well as for ratings of occurrence, severity, and distress for the 38 MSAS symptoms, were evaluated using parametric and nonparametric tests. Separate exploratory factor analyses were undertaken within each age group to identify symptom clusters using occurrence ratings of the 38 MSAS symptoms. Compared to the younger group (14.8 (± 7.0)), older adults reported a lower mean number of symptoms (12.9 (± 7.2)). Older patients experienced lower occurrence rates for almost 50% of the symptoms. Several symptoms were found to be more severe and distressing in older patients. Regarding symptom clusters, an eight-factor solution was selected for both age groups. Across the two age groups, the symptom clusters (i.e., physical and cognitive fatigue, respiratory, psychological, hormonal, chemotherapy-related toxicity, weight gain, gastrointestinal, and epithelial) were stable. However, symptoms within the physical and cognitive, chemotherapy-related toxicity, and gastrointestinal clusters were not consistent across the age groups. In order to provide tailored and effective symptom management interventions to older oncology patients, rou-

tine assessment of the core symptoms unique to the symptom clusters identified for this group warrants consideration. The underlying mechanism(s) for these inconsistencies is an important focus for future studies.

## **09 SLEEP QUALITY AND QUANTITY ASSESSMENT AMONG AFRICAN AMERICAN SURVIVORS OF LUNG CANCER WITH AND WITHOUT CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)**

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Improving quality of life for survivors of early-stage lung cancer (NSCLC, Stages I - IIIa) requires attention to persistent, burdensome symptoms, including sleep disturbances. The purpose of this study was to measure and assess sleep quality and quantity among African American survivors of lung cancer. Based on the Symptom Management Theory, our comprehensive assessment focuses on a racial minority group and multiple diagnostic groups (COPD vs. No COPD). This two-group, cross-sectional, descriptive study utilized cancer registry data to recruit survivors from a private oncology practice. Sixteen lung cancer survivors (N = 16) consented to participate. Measurement tools included sleep and symptom-focused questionnaires, accelerometry, sleep diary and interviews. After consent was obtained, participants answered study specific questionnaires, wore a waist accelerometer for 7 days, kept a 7-day sleep diary, and completed an exit interview. Most participants were female (68.8%, n = 11), with a mean age of 68.9 years (range 45 - 84), average time since diagnosis of 6.5 years (range 1 - 13), 56.3% had Stage I lung cancer (n = 9), and 50% (n = 8) of the participants had COPD with a mean of 4.3 comorbidities (range 0 - 9). Preliminary results reveal the mean global PSQI score was 11.4 (range 8 - 16) for participants with COPD and was 8.1 (range 1 - 12) for participants without COPD; mean hours asleep per night was 5.5 (range 3.5 - 8). Most participants (93.8%, n = 15) scored 5 or higher, indicating poor sleep quality. This study provides insight into a historically understudied minority group. Survivors

of early-stage lung cancer experience poor sleep. Our assessment study provides new evidence that sleep is an important clinical problem among this population, providing support for effective assessment strategies to understand and improve sleep. Elucidating a thorough understanding of sleep will help vulnerable survivors recover from cancer treatments, lower their risk of cancer recurrence, and manage the additional burden of comorbidities. This research targets a minority population of African American survivors of early-stage lung cancer. Among survivors with lung cancer, the relationship between sleep disturbances and COPD is not well established or understood. Having a better understanding of this relationship may lead to improved management of burdensome symptoms and outcomes.

## **010 THE EFFECTS OF BASELINE DEMOGRAPHIC FACTORS, BODY MASS INDEX, AND PATIENT REPORTED OUTCOMES ON PROJECTED OVERALL DOSE INTENSITY OF EARLY-STAGE BREAST CANCER (ESBC) CHEMOTHERAPY**

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There are persistent racial disparities noted in breast cancer outcomes. One reason is reduced or diminished chemotherapy dose intensity, which is amount of drug delivered per unit time, < 85% of prescribed ESBC chemotherapy. Few studies have investigated multiple factors jointly that may impact receipt of chemotherapy dose intensity, including demographics, body mass index (BMI), and patient-reported symptoms and physical/social functioning. This study examined the receipt of optimal dose intensity of chemotherapy in women with ESBC according to baseline factors including race, age, area socioeconomic deprivation, BMI, patient-reported symptoms and physical/social functioning. This study (RO1MD012245) used a longitudinal, descriptive, comparative design involving women with stage I-III breast cancer receiving chemotherapy in seven cancer centers in Western PA and Eastern Ohio. Instruments/Scoring: Inde-

pendent variables (IV): Age-chart review; Race-self reported as Black and White; Area deprivation index (ADI): 0 less deprived-100 more deprived, calculated per patient's address; BMI-chart review; Symptoms and physical/social functioning were measured at baseline using multiple Patient-Reported Outcomes Measurement Information System (PROMIS-29; higher score = greater symptom/function) measures, including seven items: physical functioning, anxiety, depression, fatigue, sleep disturbance, ability to participate in social roles and activities, and pain interference. Dependent variable: Chemotherapy dosage - % of chemotherapy prescribed/received in prescribed time. This variable was dichotomized according to gold standard of 85% of prescribed chemotherapy. Binomial logistic regression was used and run for each predictor in this analysis. N=181 women including 70 Black (38.7%) and 111 White (61.3%). Median age was 55 years. Median ADI score was 63. Compared to Black women, White women were 2.032 times more likely to receive  $\geq 85\%$  of prescribed chemotherapy ( $p=0.034$ ,  $p<0.05$ ). There were no significant differences in dose intensity according to age, ADI, and BMI. With each 1-point increase in PROMIS Social Function T-score, there was a 3.4% increased likelihood of receiving prescribed chemotherapy  $\geq 85\%$  ( $p=0.035$ ,  $p<0.05$ ). There were no significant associations with dose intensive chemotherapy in the other six baseline measures of PROMIS including physical functioning, anxiety, depression, fatigue, sleep disturbance, and pain interference. There was racial disparity in dose intensity of chemotherapy without another significant predictor except for social function. Further investigation into racial disparities should be measured early in the treatment course and incorporating dose reductions and early terminations throughout course of ESBC chemotherapy is warranted.

## **011 EXPERIENCE OF FAMILY CAREGIVERS OF CHILDREN RECEIVING CANCER TREATMENT: A QUALITATIVE STUDY**

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Childhood cancer treatment and caregiving negatively impact family caregivers' physical, social, and psychological well-being and professional routines while paying total attention to the child. Further, caregivers may experience financial challenges. The most common feelings experienced by caregivers include shock, being overwhelmed, despair, fear, guilt, loss, denial, sadness, and frustration. Identifying the experience of caregivers of children on cancer treatment may help identify appropriate support and care. This study aimed to explore the experience of family caregivers of children receiving cancer treatment. This descriptive qualitative study used semi-structured interviews with twenty-two caregivers of children receiving cancer treatment at two pediatric cancer centres in Malawi. The interviews were audio-recorded and transcribed verbatim. The data was analyzed using qualitative content analysis. The Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist was adhered to during the reporting of this study. Three themes emerged: (1) Caregivers' well-being, (2) Caregivers' coping mechanisms, and (3) Caregivers' perceived needs. The caregivers perceived that the diagnosis of cancer in their child affects their physical, social, and psychological well-being, affecting the care they provide. In response to the stressors of a child's cancer diagnosis and caregiving, caregivers use adaptive and maladaptive coping mechanisms. The caregivers have unmet informational, emotional, and psychological needs. Caregivers believed meeting these needs would help them cope and adjust to their child's cancer diagnosis and treatment. Caregivers of children receiving cancer treatment experience both physical and psychosocial challenges and unmet information, emotional, and psychosocial needs. Nurses must pay attention to the caregivers of children receiving cancer treatment and provide the appropriate psychosocial support. Meeting caregivers' information and emotional and psychological needs should be part of care in the pediatric cancer unit. In this regard, developing a psychological intervention for caregivers of children with cancer is vital.

## **012 ASSESSING THE FEASIBILITY AND POSSIBLE BENEFITS OF INTEGRAL YOGA ON CANCER-RELATED COGNITIVE IMPAIRMENT**

## IN COLORECTAL CANCER SURVIVORS: PRELIMINARY RESULTS

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Cancer-related cognitive impairment (CRCI) is a common symptom experienced by cancer patients post treatment. Yoga has been shown to improve CRCI in breast cancer survivors; however, little is known about its effects in colorectal (CRC) survivors. The aim of this study was to examine the feasibility and possible benefits of an Integral Yoga intervention on CRCI in CRC survivors. A prospective randomized control trial design including three groups; yoga, physical activity control, and waitlist control was used. Individuals 6-months post treatment for new or recurrent CRC and with subjectively reported changes in function were consecutively recruited from outpatient clinics at a Midwest NCI-designated Cancer Center. Yoga and physical activity interventions included 90-minute in-person sessions twice a week for twelve weeks. Participants completed the Functional Assessment of Cancer Therapy – Cognitive Function (FACT-Cog) questionnaire pre-intervention and 3-months and 6-months after initiating the intervention with similar timepoints for the waitlist control group. Descriptive statistics and paired t-tests were used to assess feasibility and possible benefits of yoga on CRCI. Twenty-seven men (n=13) and women (n=14) were enrolled in this study with a mean age of 54 years (SD=11.40). Enrollment and retention were 38.6% (27/70) and 74.1% (20/27), respectively. Overall adherence was 75.7% for the yoga intervention and 85.2% for the physical activity control intervention. Top reasons for drop-out were amount of time and transportation issues. No adverse events were reported. Paired t-tests showed a non-significant increase in FACT-Cog Scores over time in the Yoga Group [Time 1 (M=103.00, SD=24.98) to Time 2 (M=113.33, SD=19.96),  $t(5)=-1.68$ ,  $p=0.15$ ; Time 1 to Time 3 (M=116.17, SD=13.50),  $t(5)=-1.91$ ,  $p=0.12$ ]. Results of this study indicate that Integral Yoga in CRC survivors post treatment is safe and feasible to deliver. Enrollment was lower than expected but may have been impacted by intervention dose and/or location of in-person sessions. The low enrollment rate also suggests that individuals post treatment for CRC may experience barriers to participating in behavioral research and/or physical activity. However, once enrolled adherence was high, suggesting that Integral Yoga was well received. Findings also suggest a trend

toward improvement in CRCI in the yoga group. Identification of strategies to facilitate physical activity in individuals with CRCI post treatment are needed to support research and to inform clinical practice.

## 013 MODERATING EFFECTS OF INDIVIDUAL- AND AREA-LEVEL SOCIAL DETERMINANTS OF HEALTH ON THE RELATIONSHIPS BETWEEN PSYCHONEUROLOGICAL SYMPTOMS AND QUALITY OF LIFE IN SURVIVORS OF CHILDHOOD BRAIN TUMORS

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Survivors of childhood brain tumors (SCBT) frequently experience psychoneurological symptoms (PNS), including fatigue, anxiety, depressive symptoms, and sleep disturbance. Higher PNS were associated with poorer quality of life (QOL) in this population, but moderation by social determinants of health (SDOH) have yet to be examined. This study aimed to examine the potential moderating effects of individual- and area-level SDOH and sociodemographics on the association between PNS and QOL in SCBT. This cross-sectional study recruited SCBT from a pediatric cancer institution in Atlanta, GA, from 2020 to 2022. Sociodemographics (i.e., age, gender, race, and ethnicity) and individual-level SDOH (i.e., health insurance status and annual household income) were collected via electronic medical records and parent-reported surveys. Area-level SDOH via the Area Deprivation Index (ADI) was constructed from a participant's 9-digit ZIP code. Composite PNS scores were calculated by averaging T-scores from the Pediatric Patient-Reported Outcomes Measurement Information System (PROMIS) scales for self-reported fatigue, anxiety, depressive symptoms, and sleep disturbance. QOL was assessed using the Pediatric Quality of Life (PedsQL) v4.0 core scales. Linear regression models estimated the association between QOL and PNS and tested the hypothesized SDOH moderation via interaction terms. Participants (n=40) primarily had medulloblastoma (65%) and a mean age of 13.7 years

(SD=4.4). Most participants were female (60%), White (62.5%), non-Hispanic (77.5%), had public insurance (52.5%), had an annual household income greater than \$60,000 (52.6%), and resided in the top three least disadvantaged state ADI deciles (66.7%). The average PNS score was 47.2 (SD=9), while the average total QOL score was 82.9 (SD=11.9). A higher PNS score was associated with worse QOL ( $r = -0.928$ ,  $p < 0.001$ ). Individual- and area-level SDOH variables demonstrated no significant moderating effect on the association between PNS and QOL. Gender and ethnicity demonstrated a significant moderating effect, with fe-

male and non-Hispanic participants demonstrating a greater negative association of QOL with PNS (Figure 1). The sociodemographic variables of gender and ethnicity demonstrated a significant moderating effect on the association between PNS and QOL in SCBT. While the SDOH variables were not statistically significant, clinicians and researchers must still consider how SCBT's demographics, resources, cultural experience, and living environments influence PNS and QOL. Studies with larger sample sizes are needed to further explore the impact of individual- and area-level SDOH on survivorship outcomes.