

## Scientific Poster Abstracts

### ***“I Knew He Was Getting Worse Because He Would Let Me Drive”: Next-of-Kin’s Characterizations of Turning Points and Markers of Decline for Patients with Life-Limiting Illness (S701)***

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#### *Objectives*

- Expose attendees to how next-of-kin become aware of the emergence of life-limiting illness and keep track of its progression outside of the clinical setting.
- Engage the attendee in a discussion of the implications of the lay perspective for informing the clinical perspective on the trajectory of life-limiting illness.

**Original Research Background.** The clinical perspective on the trajectory of life-limiting illness is well documented. However, we know far less about how next-of-kin become aware of and keep track of changes in a patient’s condition outside of the clinical setting.

**Research Objectives.** The purpose of this qualitative analysis was to explore next-of-kin’s characterizations of the emergence and progression of a Veteran’s life-limiting illness.

**Methods.** Using a phenomenological perspective, we conducted a secondary analysis of face-to-face interviews with 78 next-of-kin of deceased Veterans.

**Results.** Next-of-kin relied on personal observations grounded in everyday life to mark the emergence and progression of the Veteran’s illness. Observations were anchored in specific timeframes and situated in particular places and events. “Turning points” and “markers of decline” were salient constructs in next-of-kin’s accounts, bringing to mind details of the “when’s” and “where’s” awareness of life-limiting illness emerged. Turning points and markers of decline served as signals and signposts, representing a line of demarcation after which the Veteran’s health never was the same. Lay awareness of the Veteran’s

worsening condition often preceded clinical documentation.

**Conclusion.** Next-of-kin recalled the emergence and progression of a Veteran’s life-limiting illness as part of a larger narrative of the patient’s life. Awareness of declining health was embedded in the spatial-temporal contexts of everyday life and typified as turning points and markers of decline.

**Implications for Research, Policy, or Practice.** Findings suggest that the provider’s understanding of the patient’s illness trajectory can be informed by eliciting next-of-kin’s observations of specific times, places, or events which alerted them to any changes in the patient’s condition. Next-of-kin’s characterizations of the illness trajectory can complement clinical information and enrich clinical practice by articulating the story behind the medical history and portraying the Veteran as a person whose illness unfolded within a spatial-temporal order where ordinary times and events sensitize family members to an altered health status.

### ***Outcomes of a Specialized Interdisciplinary Approach for Cancer Patients with Aberrant Opioid-Related Behavior: A Preliminary Report (S702)***

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#### *Objectives*

- Review aberrant opioid use in palliative care.
- Discuss strategies to address aberrant opioid use.

**Original Research Background.** Data on the development and outcomes of effective interventions to address aberrant opioid-related behavior (AB) in cancer patients is lacking. Our outpatient supportive care clinic developed and implemented a specialized

interdisciplinary team approach to manage patients with AB.

**Research Objectives.** The purpose of this study was to report clinical outcomes of this novel intervention.

**Methods.** The medical records of 30 consecutive patients with evidence of AB who received the intervention and a random control group of 70 patients without evidence of AB between January 1, 2015 and August 31, 2016 were reviewed.

**Results.** At baseline, pain intensity ( $p=0.002$ ) and opioid dose ( $p=0.001$ ) were significantly higher among patients with AB. During the course of the study, the median number of ABs per month significantly decreased from 3 pre-intervention to 0.4 post-intervention ( $p<0.0001$ ). The median morphine equivalent daily dose decreased from 165mg/day at the first intervention visit to 112mg/day at the last follow up ( $p=0.018$ ) although pain intensity did not significantly change ( $p=0.984$ ). 'Request for opioid medication refills in the clinic earlier than the expected time' was the AB with the highest frequency prior to the intervention and the greatest improvement during the study period. Younger age ( $p<0.0001$ ) and higher ESAS anxiety score ( $p=0.005$ ) were independent predictors of the presence of AB.

**Conclusion.** The intervention was associated with a reduction in the frequency of AB and opioid utilization among cancer patients receiving chronic opioid therapy. More research is needed to further characterize the clinical effectiveness of this intervention.

**Implications for Research, Policy, or Practice.** The findings have implications for healthcare providers' approach to a complex clinical issue and offers a promising starting point for the creation of a standardized universal strategy for clinical teams dealing with patients on chronic opioid therapy.

***Please Ask Gently: Using Culturally Targeted Communication Strategies to Initiate End-of-Life Care Discussions with Chinese-American Older Adults (S703)*** 

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*Objectives*

- Describe how indirect communication approaches can be applied at system-wide and individual levels to assess Chinese-American older adults' readiness to engage in early end-of-life care discussions.
- Identify at least 2 depersonalized communication strategies that can be applied in your clinical practice to initiate end-of-life care discussions with Chinese-American older adults.

**Original Research Background.** Healthcare providers find facilitating end-of-life (EOL) care discussions challenging, especially with patients whose ethnicities differ from their own. Currently, there is still little guidance on how to initiate and facilitate such discussions with Chinese-American older adults and their families.

**Research Objectives.** To explore communication strategies that healthcare providers can use to assess Chinese-American older adults' readiness to engage in early EOL care discussions.

**Methods.** This qualitative study utilized focused ethnography. Along with field observations, individual semi-structured interviews with 14 community-dwelling Chinese-American older adults, 9 adult children, and 7 healthcare providers were conducted and analyzed using open coding, memos, and comparison across participants.

**Results.** Older adults, adult children and healthcare providers emphasized the importance of assessing readiness for early EOL care discussions. Moreover, they recommended using indirect communication approaches to assess older adults' readiness, which can be culturally targeted and applied at both system-wide (ie, healthcare system) and individual (ie, healthcare provider) levels. To institutionalize the practice, healthcare facilities should implement EOL care discussion assessments during check-in as part of routine intake questionnaires. In individual practice, using depersonalized communication strategies to initiate the discussion are recommended in order to assess older adults' readiness.

**Conclusion.** Assessing readiness should be an essential and necessary action for early EOL care discussions. Healthcare facilities should consider implementing the EOL care discussion assessment in their check-in paperwork process as part of the routine intake questionnaires. In addition to healthcaresystem integration, providers should implement and evaluate the suggested assessment prompts with their Chinese-American patients.

**Implications for Research, Policy, or Practice.**

Future studies are needed to further investigate the effectiveness of these assessments.

***A Cross-Sectional Pilot Study of Compassion Fatigue (CF), Burnout (BO), and Compassion Satisfaction (CS) in Pediatric Palliative Care (PPC) Providers (S704)*** 

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*Objectives*

- Understand and consider potential risk factors for CF, BO, and CS in PPC Providers.

- Understand the importance of self-care for PPC Providers.

**Original Research Background.** Compassion fatigue is emotional distress experienced by providers from contact with patients' suffering. Burnout is job-related distress due to uncontrollable workplace factors that manifest in career dissatisfaction. Compassion satisfaction is emotional fulfillment derived from caring for others. The body of literature on BO in healthcare providers is extensive, whereas CF and CS have not been comprehensively studied.

**Research Objectives.** Due to ongoing exposure to patient and family distress, PPC providers may be at particular risk for CF. To address this, we conducted a study of CF, BO, and CS among PPC providers across the United States.

**Methods.** A modified CF and CS Self-Test for Helpers and questionnaire of professional and personal characteristics were distributed anonymously to a self-generated list of providers. Multivariable logistic and linear regression models for CF, BO, and CS as a function of potential risk factors were constructed.

**Results.** The survey response rate was 39%. The prevalence of CF, BO, and CS was 18%, 12%, and 25%, respectively. Distress about a 'clinical situation,' physical exhaustion, and personal loss were significant determinants of CF. Distress about 'coworkers,' emotional depletion, social isolation, and involvement in 'non-introduction of life-prolonging therapies' were significant determinants of BO. Not feeling distressed was a significant predictor of higher CS scores, whereas physical exhaustion, history of trauma, involvement in 'non-introduction of life-prolonging therapies,' and not talking about distressing issues were predictors of lower CS scores.

**Conclusion.** CF, BO, and CS have direct influences on well-being and professional performance of PPC providers. To provide effective, compassionate care to patients, PPC providers must be attentive to predictors of these phenomena as well as cognizant of the impact that clinical experiences may have on these phenomena.

**Implications for Research, Policy, or Practice.** Further work is needed to explore additional causes of CF, BO, and CS in PPC providers as well as potential interventions to prevent CF and BO.

### **Challenges Faced by Professional Interpreters During Discussions of End-of-Life (S705)**

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Wisconsin, Wauwatosa, WI. Elizabeth Jacobs, MD, University of Texas at Austin, Austin, TX.

#### *Objectives*

- Identify the 2 prevailing challenges professional interpreters describe in mediating discussions of end of life.
- Identify 2 topics that should be discussed between providers and interpreters prior to discussions of end of life.
- Identify 2 ways providers may be able to minimize emotional challenges faced by interpreters during and after discussions of end of life.

**Original Research Background.** Use of professional medical interpreters reduces disparities in patient understanding of medical conditions and treatment options. However, interpreters must balance priorities including accuracy, impartiality, cultural awareness, and advocacy, often while working with providers who lack training in appropriate use of interpreters.

**Research Objectives.** This study examines the subjective experience of professional medical interpreters who mediate discussions of end of life. It explores the challenges they experience during these discussions and their potential impact on communication between the patient, family, interpreter, and provider.

**Methods.** Semi-structured interviews were conducted with professional medical interpreters. Questions explored subjective experiences interpreting discussions of end of life, including ways these discussions challenge the personal beliefs and values of the interpreter or patient and ways interpreters respond to perceived challenges. We analyzed the data using grounded theory. We also asked about participant language, training, and experience level. We conducted a preliminary analysis of data from seven Spanish-speaking professional interpreters.

**Results.** These interpreters had 3-11 years of professional experience and 85.7% had national certification. They mainly described challenges navigating provider misunderstandings of interpreter roles and the difficulty of maintaining accuracy and promoting patient understanding when provider communication is vague or hurried. Interpreters did not endorse that their beliefs or values might affect their work. They acknowledged emotional challenges that diminish with experience. Participants emphasized their role as a neutral conduit, occasionally acting as advocates to encourage patients to ask questions or providers to use clear language. Participants emphasized improved professional and emotional outcomes when good communication occurred between medical providers and themselves.

**Conclusion.** Vague language use and misunderstanding of interpreter roles by providers were the

prevailing challenges professional interpreters described in mediating discussions of end of life.

#### **Implications for Research, Policy, or Practice.**

This work supports the need to train providers to speak clearly with patients about end of life and to understand the role of professional interpreters.

#### ***“It Would Make a Difference, in Terms of What Options I Pursue”*: Patient-Provider-Caregiver Perspectives of Anticipated Costs (S706)**



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#### *Objectives*

- Understand patient, provider, and family member similarities and differences in perspectives surrounding anticipated cost communication.
- Understanding of how anticipated cost communication may impact treatment decision making from patient, provider, and family member points of view.

**Original Research Background.** Cancer costs raise increasing concerns heightened by costly targeted therapies and their application for advanced disease.

**Research Objectives.** We examined patient-provider-caregiver perspectives of communication about anticipated costs and barriers and facilitators to using expected costs for treatment decision-making.

**Methods.** We conducted 12 patient, 12 caregiver, and 12 provider outpatient oncology interviews (N = 36) at Stanford and 2 trained coders iteratively examined transcripts using constant comparative methods to establish themes.

**Results.** Six themes were identified: 1) Timing of Presenting Cost Information, {caregiver} “I think once a diagnosis has been developed and there is a clear path with regard to treatment...you should have an idea of what you’re getting into”; 2) Who Delivers Cost Information, {caregiver} “It’s not the doctor’s position or the physician’s assistant position, but somebody that actually understands finance and understands billing and understands the medical system”; 3) Access to Information, {patient} “...the more information you can give people upfront the better”; 4) System Wide vs. Out of Pocket Costs, {patient} “...what I probably would be more interested in is what the out-of-pocket costs would be...”; 5) Transparency, {patient} “I still would have ...lingering suspicion about what that information is going to be used for.”; and 6) Influence on Treatment Decisions, {provider} “...patients and families might make different decisions”.

**Conclusion.** Providers, patients, and caregivers have similar views about the timing and importance of accessing cost information but differ regarding

downsides. Providers fear adverse patient therapeutic decisions; patients and caregivers fear therapeutic rationing.

#### **Implications for Research, Policy, or Practice.**

Providing out of pocket costs is patient and family centered; conversations should be explicit regarding how cost data is used organizationally.

#### ***Nurses’ Knowledge, Attitude, and Confidence in Delivering Palliative Care for Hospitalized Patients with Heart Failure: An Integrative Review (S707)***



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#### *Objectives*

- Define the current heart failure clinical practice guidelines regarding the nurses’ role in communicating palliative care options to patients.
- Identify the nurses’ perceived communication barriers to delivering information to individuals in the palliative phase of heart failure.
- Discuss opportunities and strategies to remove palliative care communication barriers in the acute care setting.

**Background and Objective.** Heart failure is a nonmalignant, chronic, complex, syndrome that is common and burdensome. International heart failure clinical practice guidelines recommend that health-care providers communicate palliative care options with patients. The aim was to conduct an integrative review to review how nurses perceived communication barriers to delivering information to individuals in the palliative phase of heart failure.

**Study Identification.** CINAHL, Embase, PubMed, Scopus, and the gray literature were searched from January 1987 to February 2017. Articles were considered if participants involved nurses caring for adult heart failure in the acute care setting and the nurses identified communication barriers that inhibited palliative care discussions. Articles were excluded if the nurse was not in direct care or primarily an outpatient setting.

**Data Extraction and Synthesis.** Studies were graded for strength and quality using a reliable critical appraisal tool. Articles were formatted into a summary tool and key themes were extracted and synthesized.

**Results.** Sixteen articles met the full inclusion criteria. Most studies were qualitative or non-experimental studies of good quality. Several studies found that nurses lacked basic knowledge about palliative care or did not possess sufficient knowledge to effectively provide care. Poor knowledge of health providers of palliative care created a barrier between the provider and the

patient. Inadequate education or inexperience in palliative care led to the resistance of health providers to implementing a palliative approach.

**Conclusions and Implications for Practice, Policy, and Research.** The results of this review emphasize a lack of knowledge as a barrier to delivering palliative care. Nurses caring for individuals with heart failure need palliative care knowledge, skills and competencies to ensure that this vulnerable population receives patient centered care. To bring about practice change, education will need to be incorporated into all levels of nursing, including students and practicing nurses.

***If We Build It, Will They Come? Estimating the Need for Community-Based Palliative Care in a Public Health System (S708)*** 

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*Objectives*

- Outline the process for analyzing end-of-life care utilization patterns, using publically available death data and internal (health system and palliative care program) data.
- Describe the end-of-life care utilization patterns for vulnerable patients receiving care in a public health system.
- Explain how end-of-life utilization data can be leveraged to project the impact of CBPC services.

**Background.** Documenting the timing, types and cost of health care delivered towards the end of life can highlight the need for Community-Based Palliative Care (CBPC). Such information is particularly useful when new internal or governmental policies mandate delivery of CBPC to specific populations.

**Objectives.** Characterize the healthcare utilization patterns, including contact with inpatient palliative care (PC), for patients approaching the end of life, in a public health system. Estimate the number of Medicaid patients eligible for CBPC, as newly mandated by California law.

**Methods.** Retrospective cohort analysis, using publically-available death records and health system data to describe patients' contact with the system in the last year of life.

**Results.** During the 2-year study period (2013-2015), 2116 patients died, at an average age of 64. During the final year of life, 1316 patients

(62%) were admitted to the hospital, the only setting in which PC was available. As a result, only 21% of the entire population had any contact with PC, or 34% of those who were hospitalized. Patients' first contact with PC occurred very late (mean 44 and median 13 days prior to death). In months 6-12 prior to death, 68% of the studied population had contact with the health system, but only 2% received specialty PC in that time-frame. Average direct costs to the health system in the final year of life averaged \$34,981 per patient. Of the 747 patients who were Medicaid beneficiaries, 552 (74%) would likely have been eligible for state-mandated PC services.

**Conclusion.** In a public health system with no CBPC services, patients have high end of life costs. Most do not get any specialty PC, or only receive it weeks prior to death.

**Implications for Research, Policy, or Practice.** Analyzing healthcare utilization patterns in the final year of life can help system leaders appreciate opportunities to improve care and develop plans for ensuring access to CBPC services.

***Posttraumatic Stress Disorder in Hospice and Palliative Care: Current Knowledge, Current Practice (S709)*** 

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*Objectives*

- Define DSM-V criteria for PTSD.
- Describe common approaches to screen for and manage PTSD in the presence of life-limiting illness.
- Discuss common concerns among HPC professionals regarding the recognition and management of PTSD.

**Original Research Background.** Up to 84% of people have been exposed to a traumatic event in their lives; 15-24% develop posttraumatic stress disorder (PTSD). PTSD symptoms generally decrease over time, however 24% experience persistent symptoms, 62% intermittent ones. Reactivation can occur 25-30 years later. Reactivation triggers include changes in health and fear of death. Trust issues and communication breakdowns associated with PTSD can complicate patient-professional relationships.

**Research Objectives.** To describe current PTSD knowledge and practices of hospice and palliative care (HPC) professionals across disciplines.

**Methods.** Members of AAHPM, HPNA, Social Work Hospice and Palliative Care Network, and the Association of Professional Chaplains were invited to participate in a survey exploring knowledge, training, screening/assessment and management of PTSD.

Data were analyzed using descriptive statistical techniques and content analysis of open-ended responses.

**Results.** Obtained 385 responses from 44 states and nine countries. 77% female, 23% male ranging in age from 24-76 years and with 1-50 years in practice. Respondents included physicians, advanced practice nurses, RNs, SWs, and chaplains. The majority had a working knowledge of PTSD, less for PTSD at end of life. 62% routinely screen for PTSD. 53% use medications to manage PTSD, the most common being sertraline. Therapy/counseling often delivered by SWs are commonly used non-pharmaceutical interventions. Open-ended comments discussed under-recognition, challenges, knowledge limits, and care of Veterans.

**Conclusion.** There is a general awareness of and knowledge about PTSD among HPC professionals; however, more education and a better understanding of the condition and its recognition and management are needed.

**Implications for Research, Policy, or Practice.**

Interdisciplinary care is imperative, as is the need to integrate general knowledge, screening and management of trauma and PTSD into the education of all HPC professionals. More research is needed to fully understand the impact of PTSD and to develop best practices for assessing and managing PTSD in the presence of life-limiting illness.

***Impact of a Nurse-Driven Opioid Titration Protocol on Appropriateness of Orders at End of Life (S710)*** 

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*Objectives*

- Determine appropriate symptom management for inpatients at end of life.
- Describe the impact of a standardized symptom management protocol on the appropriateness of orders at end of life.

**Background.** A nursing-driven opioid titration protocol and symptom management order set were developed at a community teaching hospital to be used to manage pain and dyspnea in patients at the end of life.

**Aim Statement.** The aim of this study is to evaluate the impact of the opioid titration protocol and order set on symptom management at the end of life.

**Methods.** This is a retrospective study in which medical records of adult patients that received morphine infusions for end of life were analyzed. An order set and nursing-driven opioid titration protocol were implemented in August 2016 following extensive nursing education. Medical records were reviewed during 3-month periods pre and post implementation (PRE-group and POST-group) for the presence of supportive care management and appropriate opioid infusion orders. Morphine orders were considered appropriate if they included an as-needed bolus dose with an objective indication, and specific infusion titration instructions.

**Results.** There were 32 patients included in the PRE-group and 37 patients in the POST-group. In the PRE-group, 6 of 32 orders (18.8%) were considered appropriate compared to 35 of 37 orders in the POST-group (94.6%,  $p < 0.0001$  for comparison). Of the orders considered inappropriate in the PRE-group, 12 included a sedation score as a target, 7 listed "comfort" as a target, and 7 did not state any goal or target. Morphine infusion orders in the POST-group were significantly more likely to include a maximum dose ( $p = 0.041$ ) and an initial bolus dose ( $p < 0.0001$ ) compared to the PRE-group. In addition, patients in the POST-group were significantly more likely to receive additional medications to manage other end of life symptoms ( $p < 0.05$  for all).

**Conclusions and Implications.** In this study, implementation of a standardized opioid titration protocol and symptom management order set led to an improvement in the management of symptoms such as pain and dyspnea at end of life.

***On Death (or: Life, as Told Through Four Prompts) (S711)*** 

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*Objectives*

- Understand a standardized approach to discuss death and dying with individuals from diverse backgrounds.
- Learn about the character and goals of the rising generation of physicians.

**Original Research Background.** On Death is an interview series released every 2 weeks by medical student Eugene Kim (MS3) to investigate and discuss death and dying. The interviews can be found in their entirety online: (<https://itunes.apple.com/us/podcast/on-death/id1106730310>) or ([www.mnmwod.com](http://www.mnmwod.com)). The purpose of the podcast is to investigate the various perspectives on the dying process through four open-ended prompts. The subject is culturally taboo and most end-of-life discussions are not held until they are absolutely necessary. This project aims to

change the cultural views surrounding the end of our life-cycle.

**Research Objectives.** To provide a standardized tool to discuss death and to investigate the various populations of interviewees for trends based on age, gender, as well as ethnic and religious backgrounds.

**Methods.** As of submission, 50 45-120-minute interviews conducted based on four prompts:

1. I am...
2. Before I die, I want...
3. When I die, I want...
4. After I die, I want...

Each interview is processed for major responses. Responses are qualified into categories and weighted according to number of responses provided.

**Results.** The majority of interviews have been conducted within a narrow age and professional range: 20-30-year-old students. Further analysis is pending.

**Conclusion.** The data collected thus far allows for comparison with the younger (under 20) or older (over 30) groups. Limited comparisons can be drawn due to lack of sufficient data from these sides of the bell curve. By the time of presentation in March, there will be an additional 17 interviews which will attempt to flesh out these groups.

**Implications for Research, Policy, or Practice.** A quantified and qualified approach to death and the understanding through various age, ethnic, and religious groups. A standardized tool via the four prompts to facilitate discussions between care-givers and patients, as well as peer to peer.

### ***Outcomes of an Innovative 6-Week Standardized Residential Training Course for Physicians and Nurses to Provide Primary Palliative Care in India (S712)***

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#### *Objectives*

- Feasibility to conduct a 6-week residential course in a developing country for physicians and nurses.
- Knowledge improvement in major areas of palliative care.

**Original Research Background.** The National Program on Palliative Care (NPPC) by the Government

of India has emphasized the need for training clinicians in providing palliative care (PC) with minimum of 6 weeks of residential training. However, there are limited studies on feasibility of such standardized training in PC offered to palliative care providers interested in transition to palliative care.

**Research Objectives.** To evaluate the feasibility, and change in the self-reported perception of knowledge in palliative care following a 6-week standardized residential training course (SRTC) for physicians and nurses to provide primary PC in India.

**Methods.** A 6-week standardized residential type educational program, which combined didactics and bedside hands on palliative care training by PC specialists in 5 preselected centers in India. To be eligible licensed physicians and nurses should, (a) qualify in focused interview aimed to evaluate both interest and commitment to provide primary palliative care following the training, (b) Agree to complete all the required surveys.

**Results.** 46/53 (86%) completed the pre and post surveys. 50/53 (94%) participants completed the course and passed the certification exam. Median age (IQR) was 31 (27, 41). 53% were female and 53% were physicians. Median reported knowledge (1-5) for pain, fatigue, delirium, medical ethics were 4,3,2,2.5 before training vs 5 (P=0.001), 5 (P=0.001), 5 (P=0.001), 5 (P=0.001) after training respectively. All other core areas improved significantly. All participants noted satisfaction with faculty as high (5/5).

**Conclusion.** Conducting a 6-week standardized residential training course in PC for physicians and nurses in India is feasible. There was a significant improvement in self-reported knowledge of all components of palliative care curriculum. Long term impact studies are needed.

**Implications for Research, Policy, or Practice.** This will have implications for developing countries who need capacity building of physicians trained adequately to practice primary palliative care. We implemented a standardized curriculum and evaluation methods to improve quality of education.

### ***Influence of Disease Status on Symptom Burden and Quality of Life in Children with Cancer (S713)***

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San Julian Mark, MD, Cincinnati Children's Hospital Medical Center, Cincinnati, OH.

#### Objectives

- Understand the high prevalence of distressing symptoms in children with cancer.
- Describe the relationships between family caregiver-reported symptoms/quality of life and physician-reported disease status in this cohort of children with cancer.

**Original Research Background.** Symptom burden in pediatric cancer patients worsens with disease progression and cancer-related treatment. However, the specific relationship between disease status and symptom burden/quality of life (QoL) is poorly understood.

**Research Objectives.** To describe the prevalence of symptoms of children with cancer, and evaluate the relationship of symptoms and quality of life with physician-reported disease status.

**Methods.** Family caregivers of newly diagnosed or newly relapsed children completed symptom (MSAS) and QoL (PedsQL) questionnaires prospectively during a 24-month period. Physicians completed questionnaires measuring disease status (SOIS) at each time point. Statistical analysis via a Generalized Linear Mixed Model compared symptoms, QoL, and disease status at each point.

**Results.** Family caregivers of 43 children with cancer (19 ≤ 12 years old, 24 > 12 years old) were enrolled. >95% of children exhibited at least one symptom. Lack of energy (91%) and sadness (88%) were most prevalent. Caregiver-reported PedsQL scores showed significant negative correlation with SOIS scores. MSAS scores were not correlated with SOIS scores.

**Conclusion.** Symptom burden was high in this cohort of children with cancer. Our results showed that increased disease severity correlated with decreases in caregiver-reported QoL, but had no direct relationship with perceived symptom burden. This may suggest that disease severity is more directly associated with QoL than actual symptom burden, even in a population with a high prevalence of symptoms. Alternately, physician reports of disease severity may influence parental perception of their child's health-related QoL.

#### Implications for Research, Policy, or Practice.

Better understanding of the relationship between disease status and symptoms/QoL may facilitate improved supportive care for children with cancer and their caregivers. Further research should solicit patient and caregiver perspectives of disease status in addition to symptoms/QoL.

### Assessing Opioid Stigma in Oncology Outpatients Receiving Palliative Care for Cancer-Related Pain (S714)



Chad Kollas, MD FACP FCLM FAAHPM, Orlando Health UF Health Cancer Center Orlando, FL. Beth Boyer Kollas, PhD MS MDiv CIPC, Central Florida YMCA, Orlando, FL.

#### Objectives

- Define opioid stigma and describe its prevalence in oncology outpatients.
- List the main reasons why oncology outpatients may experience difficulty in filling opioid prescriptions.
- Identify areas for future research to help reduce opioid stigma and protect cancer patients' access to controlled pain medications when medically appropriate.

**Background.** In 2012, responding to the opioid crisis, the Florida Legislature passed laws restricting access to controlled pain medications prescribed for chronic, non-malignant pain. While this legislation explicitly sought to preserve cancer patients' access to opioid analgesia, many oncology patients subsequently reported feelings of opioid stigma and difficulty filling prescriptions for opioid analgesics.

**Aim Statement.** The main goal of this project was to estimate the prevalence of opioid stigma felt by oncology patients with cancer pain and to assess the extent to which they had difficulty filling prescriptions for opioid analgesics. A secondary goal was to identify factors that might predict opioid stigma and create opportunities to improve oncology outpatients' palliative care.

**Methods.** We interviewed 250 consecutive oncology outpatients receiving palliative care for cancer-related pain. We defined opioid stigma as a feeling of shame, disgrace or discrimination based on usage of opioid analgesia. Data included patients' age, gender, primary and secondary diagnoses, survivorship status, perception of opioid stigma, and sources of difficulty filling opioid prescriptions.

**Results.** The patients' mean age was 57 years, 59% were female and 54% were cancer survivors with "no evidence of disease" clinically or radiographically. Over half (54%) experienced opioid stigma and almost 3/4 (73%) reported difficulty filling opioid prescriptions. Patients identified pharmacists as the most common source of opioid stigma (34%), while the most common problem in filling prescriptions arose from a lack of supply of medication (55%). Cancer survivors experienced significantly less stigma from friends and family or from hospitals and emergency rooms than those with active cancer ( $P < 0.05$ ).

**Conclusions and Implications.** Most oncology outpatients receiving palliative care for cancer-related pain experienced opioid stigma and many had difficulty filling prescriptions for opioid analgesics. Future policy efforts to address the opioid crisis should anticipate a high potential risk for negative unintended consequences for patients receiving palliative care.

***Perceptions of Patient Portal Use for Advance Directive Documentation Among Older Adults with Multiple Chronic Conditions (S715)*** 

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*Objectives*

- Discuss two methods for using patient portals for advance directives.
- Apply three technological design recommendations for advance directive patient portal tools.

**Original Research Background.** Advance directives (AD) are frequently under-recorded in electronic medical records (EMR). Technology can play a role in facilitating AD documentation using patient portals, secure websites for personal health information and provider resources directly linked to an EMR. Although older adults with multiple chronic conditions are a target group for AD documentation, little is known about their opinions regarding AD documentation via patient portals.

**Research Objectives.** Assess perceptions about using patient portals for ADs.

**Methods.** Qualitative focus groups with Kaiser Permanente Colorado patients  $\geq 65$  years, with a Carlson Comorbidity Index score  $\geq 2$ , both patient portal users and non-users, identified using stratified random sampling. Six structured focus groups were completed, audio-taped, and transcribed. Participants were asked about portal functionality including uploading ADs directly into the EMR and portal design preferences to promote AD documentation. We used inductive open coding and patterned analysis to analyze data.

**Results.** Twenty-four participants were mean  $78 \pm 5.4$  years of age and 70% female. The majority had completed an AD. Participants were not aware of AD resources available on the patient portal, and some explained they would not upload an AD due to security concerns and preferences to keep their ADs with family. Participants interested in using the portal for AD documentation emphasized the importance of

professional assistance, location of AD information on the portal, and access to their current AD as key elements for design.

**Conclusion.** Some older adults may be reluctant to use a patient portal for AD documentation, while others are likely to use a portal for ADs with proper portal design and support.

**Implications for Research, Policy, or Practice.** Attentive design including easy to access resources, intuitive headings, and access to technical help may promote older adults use of patient portals for AD documentation.

***Patients' Perspectives on Quality of Serious Illness Care in Primary Care (S716)*** 

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*Objectives*

- Identify major themes in quality of serious illness care, in the context of overall quality in primary care, from the patient perspective.
- Describe the importance of integrating the patient perspective into the development and/or enhancement of quality measures in serious illness care.

**Original Research Background.** Despite increased focus on measuring and improving quality of serious illness care, there has been little emphasis on the primary care context or incorporation of the patient perspective.

**Research Objectives.** To explore patients' perspectives on the quality of serious illness care in the primary care context.

**Methods.** We interviewed 20 patients aged 60 and older who were participants in a primary care clinic advance care planning quality improvement initiative. We used a semi-structured, open-ended guide focusing on how patients perceived quality of serious illness care, particularly in primary care. We transcribed interviews verbatim and inductively identified codes using MAXQDA 12. We used thematic analysis and a constant comparative method to refine emergent themes based on what was consistently reported and perceived into a finalized codebook reflecting quality of primary care.

**Results.** We identified five main themes pertinent to patients: (1) clinician-patient communication, (2) coordination of care, (3) shared decision-making, (4)

clinician competence, and (5) access to care. Communication was an overarching theme that facilitated coordination of care between clinicians and patients, empowered patients' role in shared decision-making, enhanced clinicians' perceived competence and facilitated access. Although access to care is not traditionally considered an aspect of quality, patients considered it to be a key factor integral to the quality of care they received. Patients perceived serious illness care as a key aspect of quality in primary care.

**Conclusion.** For quality of serious illness care in the primary care context, patients identified communication as an overarching theme, as well as coordination, shared decision-making, competence and access.

**Implications for Research, Policy, or Practice.**

These patient perspectives on the quality of serious illness care in primary care should be incorporated into quality of care measures and prioritized for quality improvement initiatives to evaluate their impact with primary care clinicians.

**Which Patients Use Outpatient Palliative Care? (S717)**



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*Objectives*

- Use secondary data to understand use and timing of outpatient palliative care among those who have access to it.
- Consider ways to reduce inequities in the use of outpatient PC, for example among patients with commercial insurance, those who are older, or those with hematological malignancies.

**Background.** Academic cancer centers are increasingly offering clinic-based specialist palliative care services (OP-SPC) (Carlton, 2016), but little is known about which patients use those services.

**Objectives.** To understand how many patients use OP-SPC, and the characteristics associated with use of OP-SPC.

**Methods.** Retrospective study using billing/administrative data from an NCI-designated cancer center and safety-net hospital. Data were extracted for cancer patients using VCU for ongoing care (2+ ambulatory visits in the year prior to death) who died between August 2013 and June 2016. 1,701 patients with solid tumors and 313 with hematological malignancies met criteria (total n=2,014). Potential predictor

variables of OP-SPC use in final year of life included in the analysis were age, sex, race, marital status, socio-economic status (three variables), insurance status, cancer type, comorbidities, and utilization in the 12-24 months prior to death.

**Results.** 240 (13.7%) used OP-SPC. The number of OP-SPC visits ranged from 1 to 48, mean 4.52 (SD 5.56). The median time of first OP-SPC visit was 190 days (6 months) before death. In univariate analyses, 12 variables were significantly associated with OP-SPC use. In the stepwise logistic regression, 7 variables were significantly associated: solid tumor (OR 3.20), living in an area with higher percentage of people with bachelor's degrees or higher (OR 1.13), number of outpatient visits 1-2 years prior to death (OR 1.11 for difference of 5 visits), number of hospital days 1-2 years before death (OR 1.02), fewer comorbidities (OR 0.81), not having commercial insurance (OR 0.68), and younger age (OR 0.63 for difference of 10 years). The area under the ROC curve was 0.71.

**Conclusion.** Various patient characteristics including cancer type, utilization, insurance status, age, comorbidities, and SES were associated with OP-SPC use. No differences by sex or race were detected.

**Implications for Research, Policy, or Practice.**

Interventions to increase referrals for OP-SPC could target those less likely to use OP-SPC.

**Patients Perspectives on Participation in Clinical Trials and Palliative End-Of-Life Care for Management of Advanced Cancers In Nigeria (S718)**



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*Objectives*

- Appreciate the need to offer palliative care to all cancer patients in Nigeria.
- Understand ethical barriers to use of participation in clinical trials as a modality to management of advanced cancers in Nigeria.

**Original Research Background.** Advanced cancers remain a major cause of mortality in Nigeria. Participation in clinical trials (PCTs) and palliative end-of-life care (PEOLC) are 2 approaches to incurable cancer management in the developed nations but these have been less adopted in Nigeria.

**Research Objectives.** To determine patients' preferred approach between PCTs and PEOLC for management of advanced cancers in Nigeria.

**Methods.** Survey of 120 advanced cancer patients using a questionnaire with variables of interest including knowledge and perception about PCTs and PEOLC.

**Results.** Majority of the patients (84%) agree PCTs is an option in management of incurable cancer but just

about half accept it is beneficial and will improve their QOL, as against PEOLC, where all the patients considered it an option and deem it beneficial; with 99% and 98% respectively agreeing it will enhance their QOL and that of family members. About 56% believe PCTs carries a risk of burdensome interventions and 52% increased hospital stay at EOL while 47% are of the opinion it will increase cost of care with 45% stating it will lead to increased ICU death.

Sixty-nine percent (69%) and 63% respectively agree PCTs increases the suffering of patients and family members while 43% believe it carries a net negative risk-benefit profile, nevertheless, 83% are ready to overlook the risk of PCTs for possible therapeutic benefit while for 87%, the primary motivation for PCTs is personal cure.

Majority (58%) believe PCTs does not improve quality of dying/death contrary to PEOLC where 88% believe it would. Overall, 78%:13% prefer PEOL:PCTs; ( $X^2$ (p-value), 40.26(0.001)).

**Conclusion.** Advanced cancer patients are open to both modalities but the study reveals several ethical issues with PCTs including risk of burdensome interventions, therapeutic misconception and misperception of curability. The major determinant to accepting PEOL is its positive impact on patients' QOL.

**Implications for Research, Policy, or Practice.**

Cancer patients in Nigeria need improved access to PEOLC.

***Measuring Facilitators and Barriers to Quality Measurement and Improvement in Palliative Care Programs: Pilot Results of a Survey for Palliative Care Teams (S719)***



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**Objectives**

- Describe key potential facilitators and barriers to quality measurement and improvement in palliative care programs.
- Evaluate usability of a survey for palliative care team members to address these barriers and facilitators.

**Original Research Background.** Quality measures are not yet widely used in palliative care programs,

and methods to better understand their implementation to improve program quality are needed.

**Research Objectives.** To pilot test reliability and usability of a survey for team members to evaluate facilitators and barriers to quality measurement and improvement in palliative care programs.

**Methods.** We developed a survey using relevant constructs of the Consolidated Framework for Implementation Research, with subscales adapted from validated instruments and refined through cognitive interviews with palliative care quality experts and clinicians. Survey subscales in adaptable modules address issues such as dedicated time, education, communication, teamwork, leadership, and prioritization for quality measurement and improvement for palliative care programs. We evaluated initial reliability (internal consistency within subscales) and usability (range of responses among subscales and qualitative feedback from participants) in a pilot sample of 16 palliative care team members from sites involved in quality measurement and improvement, who completed the survey and participated in discussion groups. We conducted quantitative analyses using STATA 15.

**Results.** Participants included 8 physicians, 3 social workers, and 5 other team members; 44% worked mainly in an inpatient unit, 37% in hospital consultation and 19% in outpatient clinics. Cronbach's alpha for internal consistency ranged from 0.73-0.99 for all but one subscale. Mean Likert scores (scaled from 1-5) ranged widely among subscales, from a mean of 1.3 to 4.7. In discussion groups, respondents described survey completion as useful for assessing current quality initiatives and addressing strengths and potential improvements, particularly communication, training and engagement of team members about program quality efforts.

**Conclusion.** This novel, adaptable instrument to assess palliative care team perspectives on barriers and facilitators for quality measurement and improvement had acceptable reliability and usability in pilot testing.

**Implications for Research, Policy, or Practice.**

Assessing palliative care team members' perspectives on program quality initiatives may help to improve their implementation and outcomes for patients.

***Symptom Burden and Quality of Life in Children Who Died of Cancer (S720)***



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Norfolk, VA. Linda Pegram, MD, Children's Hospital of The King's Daughters, Norfolk, VA.

#### Objectives

- Understand the differences in the physician-reported measure of disease status in children who died compared to those that did not during the study period.
- Compare patient reports of symptoms and quality of life over time in children who died during the study period compared to those who did not.
- Compare caregiver proxy reports of symptoms and quality of life over time in children who died of cancer relative to survivors.

**Original Research Background.** Cancer is the leading cause of non-accidental deaths in children aged 5 to 14. Despite increased awareness of the importance of aggressive symptom management, children with cancer still suffer from high symptom burden and decreased quality of life (QoL).

**Research Objectives.** To describe symptoms and QoL as compared to disease status over time in children with cancer.

**Methods.** Newly diagnosed and newly relapsed children and their family caregivers completed symptom (MSAS) and QoL (PedsQL) questionnaires prospectively during a 24-month period. Physicians completed questionnaires measuring disease status (SOIS) at each time point. Statistical analysis via a Generalized Linear Mixed Model compared symptoms, QoL, and disease status in survivors compared to children who died.

**Results.** 43 children and their family caregivers were enrolled. 10 children died during the study period. Disease severity was significantly higher in patients who died than those who did not. Symptom scores did not differ significantly over time between groups. Overall, patient-reported symptoms in all subjects decreased over time. Caregiver-reported QoL was lower over time in children who died than those who did not, but patient-reported QoL did not differ significantly between groups over time.

**Conclusion.** Patient-reported symptoms/QoL did not differ between children who died during the study and those who did not. Both groups showed improved symptoms over time. However, caregiver-reported QoL worsened over time for children who died relative to those who did not. This suggests that poor disease prognosis may negatively impact parental perception of their child's QoL, despite stable patient-reported experiences over time.

**Implications for Research, Policy, or Practice.** Better understanding of symptoms/QoL in children who die from cancer may facilitate improved palliative care at end of life. Further research should investigate the discordance between patient- and caregiver-reported QoL.

### ***A Systematic Review of Advance Care Planning Interventions for Clients with Cancer Using the Transtheoretical Model of Behavior Change (S721)***



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#### Objectives

- Identify at least 2 gaps in ACP intervention design for clients with cancer using the Trans theoretical Model of Behavior Change as a framework.
- Identify at least one opportunity for altering ACP intervention timing to improve ACP engagement among clients with cancer.
- Describe at least 2 inconsistencies in outcome monitoring across ACP intervention studies for clients with cancer.

**Background and Objective.** Cancer is the 2nd leading cause of death in the United States, with nearly 600,000 deaths in 2013. Advance care planning (ACP) has been associated with care consistent with client preferences, satisfaction with the quality of death, and satisfaction with care. Despite these benefits, clients with cancer have modest engagement in ACP. ACP is a process of behavior change, and is connected to the Trans theoretical Model of Behavior Change (TTM). This systematic review analyzed approaches to ACP intervention design for clients with cancer using the TTM to identify opportunities for increasing ACP engagement.

**Study Identification.** PubMed, MEDLINE, CINAHL Plus, Cochrane Library, and Web of Science databases were searched for published peer-reviewed articles related to ACP and cancer.

**Data Extraction and Synthesis.** ACP intervention components were abstracted, assessed for their theoretical relevance, and organized using the TTM framework. Data related to intervention timing and outcomes was also synthesized.

**Results.** The search produced 3,571 articles, with 20 articles meeting inclusion and exclusion criteria for review. Most interventions were designed using the pre-contemplation (n = 18; 90%) and contemplation (n = 20; 100%) stages of change, with fewer for the preparation (n = 8; 40%) or the action/maintenance (n = 7; 35%) stages of change. Half the interventions engaged ACP late in the client's illness trajectory (n = 10; 50%). Four (20%) intervention studies lacked any ACP-related outcomes, eight (40%) had incomplete ACP outcome monitoring, and five (25%) missed opportunities to analyze changes in ACP over time.

**Conclusions and Implications for Practice, Policy, and Research.** This systematic review identified gaps in ACP interventions for clients with cancer using the

TTM. Multi-faceted ACP interventions that address all three ACP components, are matched to the client's stage of change, are timed earlier in the illness trajectory, and revisit ACP when changes in client condition (ie, relapse) occur are needed.

### **Intensivist Religiosity and Perceived Conflict During a Simulated Family Meeting (S722)**

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#### *Objectives*

- Review prior factors associated with patient and/or family members' perceived conflict during family meetings.
- Identify physician characteristics associated with physicians' perceived conflict during a simulated meeting with family of a critically ill adult patient.

**Original Research Background.** Surrogate decision-makers for adult patients in intensive care units frequently report conflict with clinicians, and previous work has identified patient and family characteristics associated with perceived conflict. To date physician factors associated with perceived conflict have not been studied.

**Research Objectives.** To test our hypothesis that religious critical care attending physicians (intensivists) are less likely to perceive conflict during a simulated family meeting.

**Methods.** Intensivists were recruited to participate in a standardized, simulated family meeting with an actor portraying a family member of a critically ill patient. Intensivists provided demographic information including their current religion and the importance of religion in their lives. Following the simulation, each intensivist rated the amount of conflict they perceived during the simulation. The association between intensivist self-reported religiosity and perceived conflict was estimated using both univariate analysis and multivariable logistic regression.

**Results.** Among 80 participating intensivists, 32 (40%) perceived conflict during the simulation. 30 (38%) reported organized religion as moderately, very, or extremely important in their lives. Intensivists for whom religion was at least moderately important comprised 27% and 53% of those who reported no conflict vs some conflict, respectively (P=0.04). After adjusting for physician gender, years in practice, clinical weeks worked in the previous year, university hospital, and the actor participating in the simulation, the relative odds of perceiving conflict

was 3.0 (95% CI 1.1–8.3, P=0.03) for religious intensivists.

**Conclusion.** Higher religiosity ratings by intensivists were associated with increased perceived conflict during a simulated family meeting.

#### **Implications for Research, Policy, or Practice.**

Further research is needed to replicate our findings and to understand why higher religiosity is associated with perceived conflict during family meetings.

### **A First Look at Trends in Post-Mortem Visit Rates of the Medicare Hospice Benefit: A National Study (S723)**

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#### *Objectives*

- State the frequency of post-mortem visits, which are new data on CMS claims.
- Understand characteristics of hospices associated with lower rates of post-mortem visits.

**Original Research Background.** Hospice post-mortem visits occurring on the day of death after the beneficiary has died became required reporting for Medicare Hospice Benefit claims in 2014. Little is known about the prevalence of such visits.

**Research Objectives.** Determine hospice beneficiaries' rates of post-mortem visit receipt and characterize providers with high rates or provision.

**Methods.** Retrospective cohort analysis of Medicare hospice beneficiaries with dates of death from April-December, 2014. Our analysis used 100% Medicare hospice claims to develop an analytic cohort of 702,187 beneficiaries that died during the study period.

**Results.** Among our analytic cohort, 321,258 individuals (45.8%) were associated with a post-mortem visit. Beneficiaries with election durations of 2 days or less had the lowest rates of post-mortem visit occurrence (35.1%) relative to individuals with longer stays (45.7% 3-60 days and 51.2% 61+ days). Among the 3,946 hospice providers with patients dying April-December 2014, we identified 787 hospices (19.9%) for which none of their patients received any post-mortem visits. We found that newer hospices and for-profit hospices were the most likely to have patients without any post-mortem visits (30.8% of hospices certified in the 2010s vs. 7.9% of hospices certified in the 1980s; 23.9% of for-profit hospices vs. 18.5% non-profit hospices). Among all hospices, the mean (median) rate was 42.3% (41.1%) of decedents being associated with a post-mortem visit, the 25<sup>th</sup>

percentile was 7.8% and the 75<sup>th</sup> percentile was 72.5%.

**Conclusion.** Approximately half of hospice decedents had a post mortem visit. Rates were lower among newer and for-profit providers.

**Implications for Research, Policy, or Practice.**

The rate of providing post-mortem visits varied substantially across hospice programs, suggesting that the post-mortem visit rate might be suitable for public reporting as a future hospice quality measure. Future work is needed to understand what other hospice characteristics correlate with post-mortem visit provision and whether visit provision rates are associated with other measures of hospice quality.

**Improving Supportive Care Access Among Cancer Outpatients: The Preliminary Design of a Data-Driven and Technology-Based Intervention (S724)** 

Salimah Meghani, PhD MBE RN FAAN, University of Pennsylvania, Philadelphia, PA.

*Objectives*

- Present patient-generated concerns and ideas to improve experience of cancer care
- Discuss an innovative technology to improve supportive care access and care navigation among cancer outpatients

**Original Research Background.** Despite focus on early integration of palliative and supportive care for cancer patients, patients with cancer struggle to preserve normalcy in a highly disruptive context.

**Research Objectives.** To elicit patient-generated concerns and ideas to improve cancer care navigation. To identify domains of an innovative technology to improve supportive care access and care transitions among cancer outpatients.

**Methods.** Cancer outpatients were recruited from an oncology clinic of a National Cancer Institute (NCI) designated cancer center. A mixed-methods design was used. The QUANT part (n=65) employed Free-listing (cognitive anthropology) to identify patients' most salient concerns about their cancer care. The QUAL comprised of in-depth patient interviews (N=32). Saliency-Index (ANTHROPAC) and thematic analysis (ATLAS ti.) was used for data-analysis.

**Results.** The mean age was 56.3 (SD=12.3); 52.4% had stage III-IV solid malignancy and majority were receiving cancer treatment for new or recurrent cancer. The findings exposed heartrending accounts of challenges in navigating health system, especially clinician-patient communication and identifying relevant health system and community resources (transportation, grocery/meal delivery services). Patients felt that they had to be the "captain of the ship" during the most vulnerable times in their lives. Based on

the analysis of the in-depth interviews, we identified five domains of unmet needs: 1) social vulnerability; 2) financial vulnerability; 3) information sharing and communication; 4) access to health system resources; 5) access to community and volunteer services.

**Conclusion.** Despite receiving care at an NCI-designated medical center, many patients felt that the information about support services was not consistently available or were pointed to too late after an event had already occurred (e.g. financial devastation).

**Implications for Research, Policy, or Practice.**

Based on the domains identified, we present the preliminary design of a technology-based intervention to improve access to supportive cancer care. The proposed technology has implications for improving care experiences of cancer patients living in the community. (Funding: American Cancer Society #128779-PEP-15-186-01, PI: Meghani, S.H).

**Developing an eHealth Intervention for Cancer Symptom Management (S725)** 

Stephanie Gilbertson-White, PhD RN APRN, University of Iowa College of Nursing, Iowa City, IA.

*Objectives*

- Describe existing gaps in the literature regarding eHealth interventions that address symptom management in rural residents with advanced cancer.
- Describe a novel eHealth intervention that addresses symptom management needs of rural residents with advanced cancer.

**Original Research Background.** Late-stage cancer diagnoses disproportionately occur in rural residents who are more likely to die from cancer than their urban counterparts. These patients have an increased need for palliative care with minimal access to these services. eHealth technologies have the potential to address this health disparity. OASIS was developed to provide tailored cancer symptom self-management support and address this gap.

**Research Objectives.** The purposes of this study are to: describe stakeholder needs/opinions regarding symptom management concerns for patients living in rural areas; and, describe the resulting eHealth intervention designed to help patients self-manage cancer related symptoms.

**Methods.** A two-phased, mixed-methods design was used to: 1) assess stakeholder needs and opinions on the role of eHealth technologies to manage cancer symptoms; and 2) evaluate usability of a symptom self-management intervention. Adult patients with advanced cancer and clinic staff from two rural cancer clinics were recruited. A descriptive qualitative approach was used to analyze interviews/focus groups and themes were identified. OASIS was developed to address the findings. OASIS provides education via a

web-app and facilitates self-regulatory problem solving skills.

**Results.** Patients (n=16) were interviewed and clinical staff (n=11) participated in focus groups. Themes identified were “impact of symptoms”, “developing self-management skills”, and “embracing technology”. OASIS consists of patient education on how to use 57 self-management strategies for 16 symptoms and a symptom/strategy tracker. Usability testing of OASIS with N=117 stakeholders found the site to be easy to use, contained relevant content, and had pleasing graphic design.

**Conclusion.** Stakeholders in rural communities report significant symptom management needs and are interested in using eHealth technologies. Research is needed to evaluate the feasibility, acceptability, and efficacy of OASIS.

**Implications for Research, Policy, or Practice.** eHealth technologies and interventions presenting exciting opportunities to address palliative care gaps in rural residents. Future research is needed to test the efficacy of these interventions.

### ***Factors Influencing Inpatient Physician-Patient Discussion About End-of-Life Decision Making (S726)***

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#### *Objectives*

- Describe discussion content regarding decision-making in inpatient end-of-life discussions.
- Identify key factors influencing the way in which physicians and patients discuss end-of-life decisions in the setting of advanced cancer.

**Original Research Background.** In the hospital, patients with advanced cancer often face high stakes decision making. While numerous studies have documented variation in patient decision-making role preferences, the way physicians, patients, and family members incorporate these preferences in an end-of-life (EOL) discussion is not well understood.

**Research Objectives.** To explore in-hospital physician-patient EOL discussion content related to EOL decision making.

**Methods.** We identified hospitalized advanced cancer patients on the oncology, hospitalist, or palliative care service who were having a planned EOL discussion with their physician. Discussions were audiotaped,

transcribed, de-identified, and coded by multiple investigators using a constant comparative approach. Discrepancies were resolved by consensus. We report key themes related to discussion of decision making.

**Results.** Forty-one discussions were recorded. Patient race included 26 whites, 12 blacks, 2 Hispanics, and 2 Asians. Twenty-one patients were female and mean age was 60.4 years (SD=12.1). All but 2 discussions included a palliative care attending physician or fellow. An oncology fellow or attending was present in 4 discussions. Decision making was discussed in 39 discussions. We identified 3 types of decisions: resuscitation, care planning and hospice, and disease-modifying treatments. Discussions were characterized by the type of decision being considered, the way in which the physician framed the decision (directive vs. non-directive), and patients' expressed preferences about decision-making role. The impact of physician framing and, to a lesser degree, patient preferences varied with the decision being made: physicians were most directive with resuscitation and least directive with care planning and hospice.

**Conclusion.** In the context of inpatient EOL discussions, conversations about the decision-making process were influenced by patients' preferences, physicians' framing, and the type of decisions.

**Implications for Research, Policy, or Practice.** Efforts to enhance communication for patients with serious illness must take into consideration not only physician communication approach and patient preferences, but the particular decision that is being considered.

### ***Validation of the Diagnostic Tool for Complexity in Palliative Care—Pilot Study (S727)***

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#### *Objectives*

- Comprehend the factors that influence complexity in palliative care.
- Know a new tool to objectively assess complexity in palliative patients.
- Know a new tool that provides an objective measure in triaging patients between basic and specialized palliative care teams.

**Original Research Background.** The Diagnostic Tool for Complexity in Palliative Care (Pal-Cx) is designed to determine which patients benefit from a referral to a specialized palliative care (PC) team, is based on the degree of complexity, and has been validated in Spain. This work describes the first steps of the Spanish tool's validation process into the English language and cultural context.

**Research Objectives.** 1) Forward and backward translation and cross-culture adaptation of the tool; 2) Pilot project to assess feasibility, content and apparent validity of diagnostic tool.

**Methods.** Four bilingual translators performed forward/backward translation of the Spanish tool to English while content experts assessed tool validity. Clinicians (n=33) completed an online survey with a Likert scale ranging from 1 to 5; (1 = "strongly disagree" and 5 = "totally agree") to test apparent validity and feasibility. Mean, frequencies, SD and Cronbach's alpha were calculated using SAS version 9.4 (Cary, NC). ¶

**Results.** We obtained content validity through literature review and feedback from PC experts. The multidisciplinary PC clinicians (30 physicians, 2 nurses, 1 medical student; 17 females (52%); mean age 39.54, SD 10.33) completed the pilot study. We found a high agreement (Cronbach's alpha .77 raw and .79 standardized) regarding the relevance and acceptance of the tool. Cronbach's Alpha with deleted variables ranged from .74 to .82 for standardized variables and .74 to .80 for raw variables.

**Conclusion.** Study findings provide evidence that the Pal-Cx translated well, showed content and apparent validity, and demonstrated feasibility.

**Implications for Research, Policy, or Practice.** Nationally, clinicians and patients would benefit from the full validation of this tool. Moreover, this tool will be invaluable for practitioners seeking an objective measure for identifying factors that influence complexity in PC and identifying patients for referrals.

### ***Palliative Care Consultation in Patients Admitted with Heart Failure (S728)***



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#### *Objectives*

- Explore effect of palliative care consultation in CHF patients.
- Considering how palliative consultation can effect decisions on resuscitation preferences.

**Original Research Background.** Prior studies have shown that although heart failure (HF) is associated with morbidity and mortality similar to advanced cancers, rates of advance care planning (ACP) remain low.

**Research Objectives.** We sought to assess if receipt of palliative care consultation (PCC) was associated with changes in markers of ACP in patients admitted for acute HF.

**Methods.** We performed a cross-sectional analysis of all patients admitted during a 1-year time period with a diagnosis of acute HF. Patients were grouped into those who underwent PCC and those who did not. Chart review was performed to determine receipt of PCC, presence of an advanced directive (AD), documented code status, and whether a change in code status occurred during the hospitalization.

**Results.** 471 patients were admitted for HF during the study period; 13% received PCC. Patients with and without PCC were similar in age, gender and ejection fraction (EF); however, patients receiving PCC were sicker, having a higher severity of illness (SOI) score. After adjusting for age, gender, EF, and SOI, HF patients receiving PCC were 3.4 times more likely to have an AD located in the EMR (95% CI 1.9-6.3). Similarly, after adjusting for age, gender, EF and SOI, patients receiving PCC were 8.2 times more likely to increase limitations on resuscitation preferences (Full to DNR) during the hospitalization (95% CI 3.8-18.0).

**Conclusion.** Receipt of PCC in patients admitted for HF was associated with an increased likelihood of having an AD in the EMR and to increase limitations on their resuscitation preferences.

**Implications for Research, Policy or Practice.** Ongoing efforts to increase the number of HF patients who receive PCC is likely to be associated with increased rates of ACP as well as limitations in receipt of overly aggressive care.

### ***Managing Changes in Condition in the SNF with a Rectal Administration Catheter to Prevent ED and Hospital Utilization (S729)***



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#### *Objectives*

- Verbalize understanding that rectal hydration and medication administration is an effective alternative to parenteral or hypodermoclysis therapy.
- Incorporate new understanding/skills that can help drive nursing efficiency and patient outcomes.
- Incorporate understanding in the use of oral medications on hand to quickly address symptoms via the rectal route.

**Background.** Options to treat a patient's change in condition when the oral route is compromised in the SNF setting are limited. Parenteral or hypodermoclysis administration of fluids and medication is possible; however, these methods have limitations, and require alternate forms of medications that can be costly. Delays in obtaining orders, equipment and supplies has the potential to increase emergency department (ED) and/or hospital utilization.

**Aim Statement.** The aim of this QI project was to look at the feasibility of the intervention to facilitate safe, easy, comfortable and effective enteral hydration and medication delivery via the rectal route, and the ability to treat changes in a patient's condition while decreasing the need for parenteral therapy and ED or hospital utilization.

**Methods.** A Pretest-posttest intervention study design was used to evaluate 11 clinical use cases of a specialized rectal administration catheter to treat patient changes in condition in four SNFs over a 2-month period between November and December 2016.

**Results.** Ten participants (100%) completed the study with 11 total use cases. Hydration was effective in all 11 use cases, with all participants tolerating the intervention without signs of discomfort or expulsion of fluids. Nine of the 11 (81%) use cases facilitated successful management of the patients' condition at the facility. In two use cases, participants had 'Do Not Hospitalize' orders on the chart. For the remaining nine use cases, ED or hospital transfer would have been necessary if unmanageable in the SNF. Of these nine use cases, seven (78%) were able to avoid ED and/or hospital utilization through successful management of the condition. The other two participants (18%) needed acute care intervention.

**Conclusions and Implications.** In all use cases the catheter provided a safe, easy, and comfortable alternative to provide hydration and medication administration compared to parenteral and previous enteral delivery options. Additionally, the SNFs were able to reduce the need for ED or hospital utilization.

***Regional Variations in the Provision of Palliative Care in Patients Hospitalized with Heart Failure within the Veterans Health Administration (S730)*** 

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MD PhD, West Haven Veterans Administration Medical Center/West Haven and Yale University School of Medicine, New Haven, CT.

**Objectives**

- Describe a method for identifying high and low performing geographical regions in terms of palliative care use within the Veterans Health Administration.
- Identify associations between the Veterans Health Administration's 18 service delivery networks, Veterans Integrated Service Networks regions and palliative use among patients hospitalized with heart failure.

**Original Research Background.** Palliative care (PC) use is increasing among hospitalized heart failure (HF) patients. The Veterans Health Administration (VHA) was an early adopter of PC, with services offered in all inpatient facilities.

**Research Objectives.** To identify regional differences in PC use and determine associations between region and PC in hospitalized HF patients in the VHA.

**Methods.** We conducted a nested case-control study of patients with HF who were hospitalized from fiscal years 2003–2015 enrolled in the Veterans Aging Cohort Study (VACS), a study of HIV-infected and uninfected adults. PC was identified using ICD-9 code V66.7. Cases with PC (n = 210) were matched 1:5 to 1,042 HF patients without the PC code by age, hospital discharge date, and ejection fraction. We categorized regions by the VHA's 18 service delivery networks, Veterans Integrated Service Networks (VISNs). We calculated the ratio of PC cases to controls for each VISN. VISNs within the top 25% of VISN ratios were defined as high performers and the bottom 25% as low performers. We conducted conditional logistic regression to determine associations between VISN and covariates including the VACS Index (prognostic indicator), HIV infection, comorbidities, hospitalization characteristics, and PC.

**Results.** The sample was 99% male, the mean age was 64±10 years and 54% of cases and 57% of controls were African American. Controlling for hospital length of stay, the VACS Index, and HIV infection, patients hospitalized in high performing VISNs had 4.46 times the odds (95% Confidence Interval [CI] 2.60 – 7.62) of PC compared to low performing VISNs.

**Conclusion.** Significant regional variation exists among PC utilization for patients hospitalized with HF within the VHA.

**Implications for Research, Policy, or Practice.** Research is needed to identify system, regional, and hospital-level characteristics associated with variations

in PC use among patients hospitalized with HF within the VHA.

**Comparison of Palliative Care Interventions for Cancer vs. Non-Cancer Patients: A Secondary Analysis of a Systematic Review (S731)** 

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*Objectives*

- Compare palliative care interventions used in randomized clinical trials for cancer versus non-cancer patients by content and structure.
- Discuss opportunities for future research regarding models of palliative care, particularly in non-malignant illnesses.

**Original Research Background.** The majority of palliative care (PC) interventions are cancer-specific; fewer trials target individuals with non-malignant illnesses.

**Research Objectives.** Compare the content and structure of PC interventions tested in cancer versus non-cancer populations.

**Methods.** Secondary analysis of a systematic review and meta-analysis of randomized clinical trials of palliative care interventions. MEDLINE, EMBASE, CINAHL, and CENTRAL were searched from each database's inception to 7/22/16. Two reviewers independently screened and abstracted data per Cochrane Collaboration guidelines. Data abstracted included: PC domains addressed, duration, location, provider specialization, and caregiver involvement. Trials were categorized by disease (cancer, non-cancer or mixed).

**Results.** Of 7,153 records, 43 trials met inclusion criteria: 19 cancer trials, 12 non-cancer trials, and 12 mixed disease trials. Compared to cancer interventions, fewer non-cancer interventions addressed the end-of-life PC domain (8% vs. 32%), were longitudinal (50% vs. 79%) (defined as interventions > 2 months), involved generalist PC (25% vs. 53%), and included caregivers (50% vs. 68%). More non-cancer interventions delivered PC in inpatient settings compared to cancer interventions (42% vs. 10%), with less use of mixed settings (defined as a combination of inpatient, outpatient, and home-based settings, 8% vs. 37%).

Delivery of care in outpatient and home-based settings was comparable between non-cancer and cancer interventions (17% vs. 16% and 33% vs. 37%, respectively).

**Conclusion.** The portfolio of oncology PC interventions is more diverse than that of non-cancer. Oncology PC trials focused more on delivering longitudinal PC in outpatient and home-based settings, had more caregiver involvement, and have begun to study generalist models of PC. Heretofore, non-cancer interventions have primarily comprised inpatient specialty consultation.

**Implications for Research, Policy, or Practice.**

Our results likely reflect the relative nascence of non-malignant PC compared to oncology PC. Given the differences between cancer and non-cancer diseases, research is needed to identify models of PC delivery whose content and structure are designed to address disease-specific characteristics.

**Descriptive Analysis of Patient-Reported Symptoms and Associated Shared Care Plans from a Primary Palliative Care Intervention (CONNECT) for Patients with Advanced Cancer (S732)** 

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*Objectives*

- Describe the Edmonton Symptom Assessment Scale (ESAS) and Distress Thermometer and be able to identify the most prevalent physical and emotional symptoms reported by advanced cancer patients enrolled in a primary palliative care study (CONNECT).
- Identify the most frequently addressed symptoms on shared care plans (SCPs) from primary palliative care visits with advanced cancer patients and how those symptoms were addressed.

**Original Research Background.** Patients with advanced cancer face physical and psychological symptoms that are often undertreated in routine oncology care. As part of an oncology nurse-led "primary" palliative care intervention, symptoms were assessed via patient-reported outcomes and addressed using shared care plans (SCPs).

**Research Objectives.** Describe the (1) frequency and severity of symptoms reported by patients with advanced cancer and (2) content of associated shared care plans.

**Methods.** Adult patients with metastatic solid tumors, ECOG performance status of  $\leq 2$ , and for whom the oncologist “would not be surprised if the patient died within a year” were included. Oncology nurses administered the Edmonton Symptom Assessment Scale (ESAS; nine symptoms, range 0-10) and the distress thermometer (range 0-10) and created SCPs at every visit.

**Results.** Among 167 primary palliative care visits conducted by 12 nurses with 77 patients, ESAS and distress thermometers were completed at 100% of visits and SCPs were completed at 83%. The highest (worst) patient-reported symptoms were tiredness (mean 4.4, SD 2.9); low sense of well-being (mean 3.1, SD 2.5); and poor appetite (mean 2.9, SD 2.9). The mean distress thermometer score was 3.4 (SD 2.8). SCPs addressed an average of 1.5 symptoms (SD 0.6) per visit. Among completed SCPs, the most frequently addressed symptoms were tiredness (38%) and poor appetite (26%); well-being was addressed infrequently (1%). 38% of SCPs included medication changes.

**Conclusion.** Patients reported a range of physical and emotional symptoms with mild severity. SCPs focused largely on non-pharmaceutical approaches to physical symptoms, while emotional symptoms and patient well-being were rarely addressed.

**Implications for Research, Policy, or Practice.**

Patient-reported outcomes coupled with SCPs provide an opportunity to alleviate symptoms as part of a primary palliative care approach for patients with advanced cancer. Oncology nurses may require additional training and support to address emotional distress and well-being.

**Utilization of High-Fidelity Simulation to Teach Advance Care Planning to Undergraduate Nursing Students (S733)**



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*Objectives*

- Describe the use of simulation for advance care planning.
- State the research outcomes of the high fidelity simulation.

**Original Research Background.** The lack of clinical opportunities for palliative care and end-of-life experiences for undergraduate nursing students creates a void in the students’ confidence, comfort, communication, and attitude to deal with these situations. Nurses report they are uncomfortable, fearful,

helpless, anxious, and often feel inadequately prepared in dealing with death and dying. Research has found that simulations improve the students’ experience with dying patients in a controlled, safe, and interactive learning environment.

**Research Objectives.** The purpose of this research was to describe the impact of simulation on the knowledge, communication, confidence, and satisfaction toward advance care planning (ACP) with nursing students.

**Methods.** Undergraduate nursing students (n=80) were recruited from an accelerated BSN program in a Tier 1 university located in Southwest United States after IRB approval. Small groups of students interviewed a high fidelity mannequin in a home-like environment while other students viewed the patient from a classroom. Groups were no larger than 17 students. Students prepared to talk about ACP. A pre-briefing session included how to initiate the talk about death and dying; de-briefing session included questions about ACP, use of words associated with end-of-life, and students’ initial responses toward conversations about death. Students completed 3 instruments (SSSL, SDS, EDQ) at the end of the simulation de-briefing. Data analysis included one group’s descriptive statistics.

**Results.** Students’ responses (agree and strongly agree were combined) included 92% felt the simulation resembled a real life situation, 95% felt that it was designed specifically for their level of knowledge and skills, 93% felt support was offered in a timely manner, 83% felt self-confident in learning, and 97% felt they had learned from comments made by the teacher.

**Conclusion.** In this limited study, high fidelity simulations showed students increased in confidence, comfort, communication, and satisfaction toward ACP.

**Implications for Research, Policy, or Practice.** High fidelity simulations for ACP increases knowledge and skills of future nurses.

**Hospital-Wide Impact of Early Palliative Care Interventions on Direct Costs and Length of Stay (S734)**



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#### Objectives

- Comprehend the impact of palliative care consultation on cost of hospitalization.
- Comprehend the methods used to estimate the impact of palliative care consultation on cost of hospitalization.

**Original Research Background.** Earlier palliative care consultations have been shown to reduce length of stay (LOS) and overall costs, while improving the quality of medical care afforded, in most, but not all studies.

**Research Objectives.** To estimate the unbiased impact of early initiation of palliative care on LOS and total direct costs.

**Methods.** This observational study retrospectively assessed patients who utilized adult palliative care consultation services at an academic medical center between the dates of January 2015 and September 2015. Palliative consults, DNR status and ICU utilization were extracted from the electronic health record. Direct costs were extracted from the Allscripts EPSi accounting module. Comorbidity information was calculated using claims records processed with CMS-HCC (v2016). The effectiveness of early onset (0-3 days from admission), as compared to mid onset (4-10 days) and late onset (>10 days) palliative consults, on LOS and total direct costs were estimated using targeted maximum likelihood (propensity-score based) additive effect estimates.

**Results.** Palliative consultation was administered to 1425 inpatient visits, stratified by the timing of consultation yields: early (n=467), mid (n=523), late (n=435). Shifting onset of palliative consultation within the first 3 days of admission is associated with a cost reduction of \$1,575 per visit (p=0.019) among the mid-onset group; and reduction of \$2,073 per visit (p=0.042) among the late-onset group. Estimated impacts of LOS are 1.4 days reduction (p=0.004) in the mid-onset group; and 2.2 days reduction (p=0.011) in the late-onset group. Subgroup analysis among critical care units and oncology wards demonstrated larger cost savings.

**Conclusion.** Early initiation of palliative care is associated with reduction of length of stay and total direct costs.

#### Implications for Research, Policy, or Practice.

Advanced evaluation (causal inferences toolkits, improved risk-adjustment and standardized costs) confirms the need for earlier utilization of palliative care as part of the normal health system workflow (i.e., clinical triggers) and propensity measures may help in targeting of key populations.

### **Efficacy of a Novel Communication Skills Intervention for Practicing Oncologists (S735)**

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#### Objectives

- Describe a novel communication skills intervention aimed at practicing oncologists.
- Evaluate the efficacy of a GoC discussion training session for practicing oncologists.

**Original Research Background.** Oncologists routinely have opportunities for goals of care (GoC) discussions with patients and their families. GoC discussions increase the likelihood that patients receive care consistent with their wishes and values. However, studies indicate oncologists often feel uncomfortable or ill-equipped to discuss end-of-life care with their patients.

**Research Objectives.** To evaluate the efficacy of a communication training and coaching intervention for oncologists to increase utilization of key communication skills (eliciting values, empathic statements, etc.) during GoC discussions.

**Methods.** We randomized solid tumor oncologists to participate in communication skills training using a coaching model at four hospitals. After attending a 1-hour lecture on GoC discussions, oncologists were randomized to intervention (INT) or usual care (UC). INT oncologists participated in an interactive 2-hour training session and conducted four joint GoC visits with communication coaches in their actual practice environment. We recorded GoC discussions before and after the intervention to assess communication skill utilization. Three blinded coders evaluated skill ascertainment using a validated assessment tool.

**Results.** Oncologists (n=22) were 67% male, average 46 years of age (range 34-68) and 20 years (range 8-42) in practice, and 59% reported training in GoC. Sixty-nine percent were White, 23% Asian, and 8% Hispanic. At baseline, there was no difference between the number of GoC skills employed by the INT group (mean 6.64 ± 3.88) and the UC group (mean 5.45 ± 2.58) (p = 0.41). Post intervention, the INT group

utilized significantly more skills in their GoC discussion (mean  $8.27 \pm 3.64$ ) than the UC group (mean  $5.36, \pm 2.25$ ) ( $p = 0.035$ ).

**Conclusion.** A training and coaching communication model resulted in a significant increase in skill utilization during GoC discussions led by practicing oncologists.

**Implications for Research, Policy, or Practice.**

Improving the quality of oncologist-led GoC discussions may be possible through interactive and innovative training programs.

**Could Payer Mix Affect Length of Stay or Readmissions Among an Outpatient Palliative Care Cohort? (S736)**



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*Objectives*

- Identify what would be an expected payer mix for an outpatient palliative care clinic/supportive oncology practice in the Southeast.
- Correlate payer source and quality metrics which include hospital LOS, disposition, and hospital readmissions.

**Background.** Outpatient palliative care is (PCC) the developing frontier of palliative medicine. Characterizing and promoting financially viable models for payment of services are imperative to their sustainability. There is a paucity of research addressing payer mix—meaning the breakdown of individuals and organizations that pay for a provider's services—in PCC or its impact on metrics important to quality in palliative care (PC) such as hospital length of stay (LOS) and hospital readmissions.

**Research.** We seek to describe the payer mix for our academic outpatient PC practice. Furthermore, we sought to identify if payer mix (commercial, government—Medicare/Medicaid—or self-pay) influenced hospital LOS, discharge to hospice, or readmissions.

**Methods.** After obtaining IRB approval, we conducted a retrospective chart review of supportive oncology patients from 2014–2017 ( $n = 3137$ ) using data restricted to ICD10 codes for solid tumors. We performed bivariate tests and multivariable logistic regressions to examine the main effects of LOS, readmissions, insurance status, and discharge disposition using SAS version 9.4 (Cary, NC).

**Results.** Payer mix included 711 (24%) commercial insurance enrollees, 2357 (75%) Medicare or Medicaid recipients, and 38 (1%) self-pay. Mean LOS was 12.7 days (SD 16.38). The majority (94%) of patients had more than five readmissions.

Commercial insurance was associated with prolonged LOS ( $\geq 30$  days), discharge disposition to hospice, and hospital readmissions ( $> 5$ ) compared to government insurance ( $p < 0.05$ ). Of the 3137 patients, 325 (10%) expired, 1328 (42%) were discharged to hospice, while 1463 (47%) were discharged to rehab, skilled nursing facilities or home care.

**Conclusion.** The majority of patients in our academic PCC had governmental insurance and were less likely than those with commercial insurance to have prolonged LOS, discharge to hospice, or hospital readmission.

**Implications for Research, Policy, or Practice.**

These findings provide evidence that investigation is needed to examine the effect of payer mix on PCC and patient outcomes.

**Relationship Between Patient- and System-Level Characteristics and Utilization of Outpatient Palliative Care in Patients with Advanced Cancer (S737)**



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*Objectives*

- List 3 specific populations, among patients with advanced cancer, that are at risk for decreased utilization of outpatient palliative care.
- Explain that geographic access can be measured as a function of travel time and be familiar with a computer software programs that can be used to calculate this.

**Original Research Background.** Utilization of outpatient specialty palliative care (OSPC) improves outcomes for patients with advanced cancer. Barriers to utilization of OSPC remain unclear.

**Research Objectives.** 1) Identify the proportion of patients with advanced solid tumors, treated within a cancer center network with well-established OSPC services, who received OSPC. 2) Identify patient- and system-level factors associated with utilization of OSPC.

**Methods.** We performed a retrospective cohort analysis of adult patients with advanced solid tumors who received oncologic treatment within the University of Pittsburgh Medical Center Cancer Center network (UPMCCCN) in 2016. Patients were identified by UPMCCCN's Registry and Information Services department from the records of a clinical decision tool used by  $\sim 90\%$  of oncologists. OSPC utilization was determined from the billing records of UPMCCCN's outpatient palliative care clinics. Additional patient demographics were obtained from the

electronic health record. Travel time from a patient's home to closest OSPC clinic was determined with ArcGIS 10.5 (ESRI, Redlands, CA).

**Results.** 9485 unique patients with advanced solid tumor cancer received oncologic care within UPMCCCN in 2016. 385 patients (4%) used OSPC, while 9100 patients (96%) did not. Patients who utilized OSPC were younger (mean age 60 v. 69 years;  $p < 0.0001$ ) and lived closer to an OSPC clinic (mean travel time 42 v. 61 min;  $p < 0.0001$ ). Patients receiving care at a primary oncology practice with a collocated OSPC clinic had significantly higher utilization of OSPC (11.4%) compared to those without a collocated OSPC clinic (0.62%,  $p < 0.0001$ ).

**Conclusion.** OSPC utilization was low among patients with advanced solid tumor cancer. Older and more remote populations are at higher risk for decreased utilization.

**Implications for Research, Policy, or Practice.** To improve palliative outcomes for all advanced cancer patients, novel healthcare delivery models are needed to engage at-risk populations in OSPC.

### ***Validation of the Diagnostic Tool for Complexity in Palliative Care—Criterion Validity Study (S738)***



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#### *Objectives*

- Comprehend the factors that influence complexity in palliative care.
- Know a new tool to objectively assess complexity in palliative patients.
- Know a new tool that provides an objective measure in triaging patients between basic and specialized palliative care teams.

**Original Research Background.** The Diagnostic Tool for Complexity in Palliative Care (Pal-Cx) seeks to determine which patients benefit from a referral to a specialized palliative care (SPC) team. The tool based on the degree of complexity in palliative care (PC) was validated in Spain. This work describes the last step of the Spanish tool's validation process into the English language.

**Research Objectives.** Researchers sought to measure criterion (concurrent) validity by comparing the

Spanish tool with the Australian tool "Needs Assessment Tool: Progressive Disease" (NAT:PD).

**Methods.** Criterion validity was evaluated by comparing our tool Pal-Cx with the Australian NAT:PD tool. Twelve (50%) PC clinicians, six (25%) nurse experts in surgery, family medicine and PC, and six (25%) medical students. We calculated Means, SD, t-test, and Cronbach's alpha using SAS version 9.4 (Cary, NC).

**Results.** For the study ( $n=52$ ), 24 clinicians (57% females) assessed 28 (54%) oncology palliative patients and 24 (46%) non-oncology PC patients with the Spanish tool and the NAT:PD tool. We found that both tools correlated significantly (t-test =17.19,  $p < 0.001$ ; Cronbach's alpha =0.82) for all similar domains indicating good convergent validity. Using previous psychometric data, researchers obtained a final version of the English Diagnostic Tool for Complexity in Palliative Care.

**Conclusion.** Study findings showed that The Diagnostic Tool for Complexity in Palliative Care (Pal-Cx) demonstrated good criterion (concurrent) validity and may be recommended as a measure for identifying appropriate candidates for a SPC referral based on the degree of complexity.

**Implications for Research, Policy, or Practice.** Clinicians seeking an objective measure for the evaluation of the factors that influence complexity in palliative care plus triggers for proper referrals would greatly benefit from this tool.

### ***Advancing Access to Palliative Medicine Services Through a Multi-Centered Interdisciplinary Educational Collaborative: The Impact of Practice Improvement Projects (S739)***



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#### *Objectives*

- Describe the structure of a multi-centered interdisciplinary palliative medicine training program, emphasizing the use of practice improvement projects.

- Discuss the qualitative analyses and results of the practice improvement projects and quantitative impact on access to palliative medicine services.

**Original Research Background.** Chicago area health care organizations seek to strengthen and expand palliative care (PC) services. The Coleman Palliative Medicine Training Program (CPMTP) meets this need through live education, mentorship, leadership engagement, and practice improvement projects (PIPs). Fifty-six physicians, nurses, social workers, and chaplains from 29 health systems completed the 2-year program. Each PIP addressed institutional gaps in PC services and required leadership support and measurable outcomes.

#### Research Objectives

- Classify PC PIP interventions and outcomes.
- Measure PC service utilization and growth at sites.

**Methods.** Two researchers independently and collaboratively reviewed the PIPs for common themes around institutional interventions and outcome measures. Qualitative data was classified utilizing a checklist reflecting key words obtained from project descriptions and outcomes. PC program characteristics and service utilization data were collected also through a registry survey for year 2012, 2014, 2015 and 2016.

**Results.** Thirty site-specific PIPs were implemented in inpatient, outpatient, nursing home, home-based care and hospice settings affiliated with 10 teaching hospitals, 9 community hospitals, 2 safety net hospitals, 1 home-based, and 1 outpatient program. Multi-interventions per project included: staff education (83%), process improvements (63%), improving access (47%), documentation improvements (23%), program-building (17%), needs assessments (10%), and patient/family education (3%). Outcome classifications were: increased access (13), unmet needs identified (13), improving care delivery improvement (11), process improvements (8), and increased service utilization (3). Of those who completed registry surveys, from 2012-2015 PC staffing increased 92% (N=19 sites); patient visits increased 139% (N=6). In 2015-2016 patient visits increased 27% (N=4).

**Conclusion.** Embedding PIPs in a PC training program can improve services at diverse health care organizations and settings. Myriad, measurable outcomes were attainable in 2 years. Regional growth in staff and increased service utilization was demonstrated over 4 years.

#### Implications for Research, Policy, or Practice.

Pooling and disseminating regional PC program metrics may stimulate institutional program growth.

### *Palliative Care and Stroke: An Integrative Review of the Literature (S740)*



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#### Objectives

- Describe how healthcare professionals involved in stroke care, stroke survivors, and their family members perceive palliative care.
- Discuss how palliative care is integrated within stroke care.

**Background.** Stroke survivors and their family members face unique needs related to life-altering functional and cognitive changes and burdensome symptoms, which negatively impact quality of life (QOL). Guidelines recommend that primary palliative care (PC) be offered to all stroke patients; however, gaps exist in understanding how PC is perceived and implemented within stroke.

**Objective.** To generate an in-depth analysis of the current state of PC in stroke by systematically examining the scientific literature.

**Study Identification.** Using guidelines proposed by Whittemore and Knafl, an integrative review was conducted. PubMed, CINAHL, and Scopus databases were used to search for peer-reviewed studies published in English between 1990 and 2016 using the terms “palliative care” AND “stroke” OR “acute stroke.” Four authors reviewed titles or abstracts for relevancy. Of 363 articles, 44 were screened for eligibility resulting in 21 articles; a review of references resulted in a final sample of 23.

**Data Extraction and Synthesis.** Two authors independently read full text versions of each study and organized data into a table. All authors met monthly to discuss findings and clarify discrepancies. Quality was evaluated using Melnyk and Fineout-Overholt’s criteria for appraisal.

**Results.** The majority of studies were descriptive and quality was rated as moderate to good. PC is most commonly offered in acute stages when patients are not expected to survive and is predominantly understood as end of life care. However, only a minority of stroke patients received this care. Evidence-based protocols facilitated PC. Healthcare professionals, patients, and families reported unmet needs surrounding communication and physical and psychosocial support, uncertainty regarding how and when to transition to PC, and conflicts surrounding decision-making.

**Conclusions and Implications for Research, Policy, or Practice.** PC was focused primarily on terminal stroke patients; however, this population reported needs that could benefit from PC throughout the stroke trajectory. Intervention research is needed to examine models of care that integrate PC and stroke to improve QOL in stroke.

***Pediatric Unexpected Death: Examination of a Unique Population and Its End-of-Life Care Management (S741)*** 

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*Objectives*

- Describe leading causes and locations of pediatric death in the United States.
- Define pediatric sudden unexpected death (SUD).
- Compare and contrast differences in demographics, medical therapies, and end-of-life conditions between children dying from unexpected causes with children dying from complications of a chronic disease in the critical care setting.

**Original Research Background.** Unintentional injury is the leading cause of death among U.S. children. Although unexpected pediatric death is more common than death from chronic disease, data on end-of-life (EOL) care in this population is scarce.

**Research Objectives.** This study aims to describe EOL conditions and practices in children who die in the pediatric intensive care unit (PICU) as a result of sudden, unexpected causes.

**Methods.** We performed a chart review of all deaths in a large PICU from 2008 to 2015. Subjects were classified as experiencing sudden unexpected death (SUD) or death related to a life-limiting condition (LLC). Descriptive statistics were used to characterize the cohorts. Wilcoxon test and Fisher's Exact test were used to compare continuous and categorical variables respectively.

**Results.** Interim analysis revealed 108 deaths in 2008 and 2009 (22% SUD). There were no significant differences in age, gender, or ethnicity. However, children in the SUD group were more likely to have government-only insurance (61%) compared with LLC group (24%) ( $p < 0.001$ ). Differences in mode of death were not significant, nor were differences in parental presence at death or DNR orders in place prior to death. The SUD group had higher rates of extracorporeal support in the 24 hours prior to death (21%) compared with the LLC group (2%) ( $p=0.02$ ). Notably, palliative care service consultation was significantly less common ( $p=0.01$ ) in the SUD group (4.2%) versus the LLC group (28.6%).

**Conclusion.** SUDs are the leading cause of pediatric death in the United States and comprise 22% of deaths in a large PICU. These patients have markers of lower socioeconomic status, and are more likely to use extreme forms of medical care just prior to death.

**Implications for Research, Policy, or Practice.** Future studies should assess parent-reported outcomes in these children, especially since pediatric intensivists typically provide primary palliative care to this large population of patients and their families.

***Family Participation in Withholding and Withdrawing Life-Sustaining Therapy Decisions: "I Just Had to Have Myself Prepared for this Day" (S742)*** 

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*Objectives*

- Understand the experience of families who are participating in end of life decisions for a family member with a life-threatening exacerbation of a chronic illness.
- Describe strategies to help families participating in decisions to continue, limit and withdraw life-sustaining therapies.

**Original Research Background.** Little is known about the experiences families face when participating in decisions to continue or limit life-sustaining treatments in the intensive care unit (ICU) setting. Understanding what families experience is important so that nurses, physicians, and other members of the interdisciplinary team can best help families.

**Research Objective.** The purpose of this study was to describe the experience of family members participating in decisions to continue or limit life-sustaining therapy on behalf of an adult family member with a life-threatening exacerbation of a chronic illness.

**Methods.** A hermeneutic phenomenological perspective guided this qualitative investigation. Purposive sampling was used to recruit families. Interviews were conducted with family members in an ICU setting as they participated in decisions to continue or limit life-sustaining treatments. All interview transcripts were transcribed with units of meaning, clusters, and then categories inductively determined. Within and across family analyses were conducted. Data saturation was reached and methodological rigor was established.

**Results.** The majority of the patients (78%) had an exacerbation of a cardiac condition and died in the ICU. Thirteen family members participated in the

investigation. Family members were a mean age of 51 years, 62% were female, 46% were the patient's spouse, and 62% were African American. The categories that evolved from the data included: illness journey: it is getting worse, hope, uncertainty, rollercoaster, guided by patient wishes, and family decision-making. Families participated with providers in a shared decision-making process.

**Conclusion.** The investigation found that family members were closely involved with the ICU team as life-limiting decisions were made on behalf of their family member.

#### **Implications for Research, Policy, or Practice.**

Nurses, physicians, and other interdisciplinary team members can help families by keeping them informed, acknowledging their difficult journey, and involving them in the decision-making process as complex decisions about continuing, limiting, and withdrawing life support are made.

### **Healthcare Providers Attitudes and Knowledge Toward Dementia in American Samoan Culture (S743)**



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#### *Objectives*

- Make attendees aware of the impact of American Samoan (AS) culture on caregivers attitudes and knowledge about AD.
- Increase understanding of the importance of developing resources for dementia education in the American Samoan culture.

**Original Research Background.** Despite modernization, AS culture has retained norms/practices, including respect toward elders, familial protection and shame of elders' behavioral symptoms, and caregiving as solely a family responsibility. Such ties to their cultural identity can impact the care AS healthcare providers give elders with AD. There is a dearth of research on AS culture and its relationship to caregiving for AD elders. The present research seeks a fuller understanding of how AS cultural practices shape caregivers' awareness, attitudes/knowledge about AD in AS.

**Research Objectives.** Understand impact of American Samoan (AS) culture on caregivers' attitudes/knowledge about Advanced Dementia (AD).

Determine resources for dementia education and care supports for AS culture.

**Methods.** 1) Focus Groups, (n=54): Four, 1-hour sessions conducted with community-based caregivers/

advocates, using a semi-structured Moderator Guide. 2) Semi-structured Interviews (n=26) conducted with physicians. 3) Key Informant interviews (n= 3). 4) Ten-item Survey asking about knowledge/attitudes towards AD, administered to all participants prior to focus groups/interviews (n=80). Emergent themes were analyzed using Dedoose web-based qualitative software.

**Results.** Survey indicates 50% of sample conceptualized AD as a normal part of aging and a terminal illness, and 83% conceived it as mental illness. Further, 70% believed it was not painful, and people with AD should be cared for at home (74%). Focus groups/interviews corroborated these findings, showing AS lack knowledge about AD that is based in: 1) nuances of AS language, conceptualizing AD as a mental and terminal illness; 2) respect for elders, making it shameful for others to see their elders' behavioral symptoms, and, 3) caring for elders with AD as responsibility of family.

**Conclusion.** AS cultural norms embedded in language play a role in shaping attitudes/ knowledge of healthcare providers about AD.

#### **Implications for Research, Policy, or Practice.**

Developing culturally sensitive educational materials and disseminating them through community advocates, faith-based organizations and audio-visual channels.

### **Geriatric Trauma and Palliative Care (GET PC): Identifying Characteristics of the Population (S744)**



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#### *Objectives*

- Understand the rationale for why the study of palliative care and geriatric trauma patients is important.
- Describe the significant characteristics of geriatric trauma patients that received palliative care consultation at a level 1 trauma center.

**Original Research Background.** Palliative care consultation (PCC) is effective in reducing length of stay (LOS) and readmissions in many settings. However, little is known about the frequency and effectiveness of PCC in geriatric trauma patients. Research has highlighted both the increasing number of geriatric trauma patients in US hospitals and the associated morbidity and mortality.

**Research Objectives.** To describe the specific characteristics of geriatric trauma patients that received

PCC at a community teaching hospital with a level 1 trauma center.

**Methods.** A retrospective observational study was completed using data obtained from the trauma registry and hospital administrative data. Patients aged 65 and older admitted to the trauma service between January 2013 and December 2015 for > 24 hours were included. Bivariate analyses using  $\chi^2$  and t-tests were used to identify covariates associated with having PCC. Covariates with  $p < 0.25$  were included in a mixed-effects logistic regression model.

**Results.** There were 1,343 patients in the trauma registry that met inclusion criteria; 151 (11.2%) received PCC (91 (60.3%) female, 144 (95.4%) white, and 111 (73.5%) admitted to the ICU). In the adjusted model, factors significantly associated with having a PCC included age (OR 1.05,  $p < 0.001$ ), ISS=16-24 (OR 3.60,  $p < 0.001$ ), ISS $\geq$ 25 (OR 13.77,  $p < 0.001$ ), ICU admission (OR 1.74,  $p = 0.025$ ), Alzheimer's disease (OR 2.10,  $p = 0.020$ ), dementia (OR 1.64,  $p = .048$ ), DNR at admission (OR 1.86,  $p = 0.036$ ) and spinal injury (OR 2.58,  $p < 0.001$ ).

**Conclusion.** This study identified characteristics of a geriatric trauma patient population correlated with PCC while admitted to a level 1 trauma center.

**Implications for Research, Policy, or Practice.** This study can help facilitate future efforts to assess LOS, readmission rates, mortality rates, and identify triggers for PCC in geriatric trauma patients.

### *Should States Allow Physician-Assisted Suicide or Euthanasia? A Survey of Hospice Personnel (S745)*

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#### *Objectives*

- Understand that hospice personnel and the general public have different beliefs about states allowing physician assisted suicide (PSA) and euthanasia.
- Should question why there is a difference in beliefs about PSA and euthanasia between hospice personnel and the general public.
- Discuss how ethnicity, gender and religious affiliations affect the belief of allowing PSA and euthanasia.

**Original Research Background.** Recent Gallup polls found that nearly 70% of Americans support physician assisted suicide (PSA) and euthanasia. We would expect that the majority of hospice personnel

would also support PSA/euthanasia. This study explores how hospice personnel respond to questions about PSA/euthanasia and factors that may influence their decisions.

#### **Research Objectives**

- Compare opinions of hospice personnel to the general public regarding PSA/euthanasia.
- Understand that ethnicity, gender and religion affect opinion on PSA/euthanasia.
- Identify areas where education/clarification are needed.

**Methods.** A 32-question survey was emailed to 2097 employees and volunteers at a nonprofit hospice. Questions included demographics and if states should allow PSA (886 respondents) and euthanasia (885 respondents). Answers were analyzed based on ethnicity, gender and religious affiliation.

**Results.** Of the respondents of the survey, 44% supported states allowing PSA and 36% supported states allowing euthanasia. Ethnicity, gender and religious affiliation show a variation in whether or not people believe states should allow PSA or euthanasia. Those individuals who completed an advance directive were more likely to support PSA and euthanasia.

**Conclusion.** The majority of hospice employees and volunteers do not support PSA and euthanasia. This survey was from a large metropolitan nonprofit hospice in southeast Florida and polling hospices nationwide may show different results.

In our study 18% of respondents polled about PSA answered "not sure/not sure what PSA means" and 23% answered "not sure/not sure what euthanasia means."

#### **Implications for Research, Policy, or Practice.**

The survey does not answer why there is a difference between hospice personnel and the general public about PSA/euthanasia suggesting further research needs to be undertaken to discover why there is a difference. The results identify a need to educate hospice personnel so we can help educate the general public in understanding these terms. States should ensure the voting public has a clear understanding of these terms before allowing PSA or euthanasia.

### *Symptom Burden and Palliative Care Among Patients with Multi-Morbidity (S746)*

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#### *Objectives*

- Identify patient-level predictors of high symptom burden.

- Describe strategies to implement and evaluate standardization of symptom assessment and management protocols in primary care settings.

**Original Research Background.** Palliative care research has largely focused on patients with disease specific conditions. As patients age, they often accumulate diseases that increase their risk of death that is not attributable to a single condition.

**Research Objectives.** We assessed symptom burden and quality of life among patients with  $\geq 3$  chronic conditions to determine whether patients receive assessment and treatment consistent with palliation of symptoms. We hypothesized a higher number of comorbidities would be associated with greater symptom burden and poorer quality of life.

**Methods.** We identified patients at high risk of hospitalization or death using a prognostic model. We administered cross-sectional surveys (Memorial Symptom Assessment Scale and Veterans-Rand 12) to randomly selected patients enrolled in primary care clinics in the VA Health Care System from May-December 2015. We asked patients if their most bothersome symptom was addressed and being treated during their recent appointment. Regression models identified patient-level predictors of high symptom burden and poor self-perceived health status.

**Results.** Patients (n=503) were white (74%), males (97%), aged  $71 \pm 11.2$  years. Patients reported  $10.6 \pm 5.5$  active symptoms and poor quality of life ( $28.6 \pm 11.4$ ) (physical component scale 0-100, higher score=better health). Pain and dyspnea were the most burdensome symptoms (n=145, 29%; n=57, 11%) respectively. Among patients, 348 (74%) perceived their clinician assessed their most bothersome symptom and 330 (70%) reported they were receiving treatment for it. Younger patients (p=0.01) and those with a greater number of multi-morbidities (p<0.001) reported higher symptom burden than older patients and those with fewer multi-morbidities. Younger patients (p=0.002) and those with a greater number of multi-morbidities (p<0.001) perceived themselves as having worse physical health than older patients and those with fewer multi-morbidities.

**Conclusion.** Our findings support standardization of symptom assessment and management in primary care settings for patients with multi-morbidities. Ameliorating symptoms may result in patients' higher perceived quality of life.

**Implications for Research, Policy, or Practice.** Implementation of assessment protocols.

### ***Does Palliative Care Improve the Quality of End of Life Care in the Intensive Care Unit?*** (S747)

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#### *Objectives*

- Present original research from a retrospective study of palliative care consultation and quality of care at the end of life in the intensive care unit.
- Present original research from a retrospective study of palliative care consultation time and quality of care at the end of life in the intensive care unit.
- Present a novel scoring system to assess quality of end of life care using chart based metrics.

**Original Research Background.** There are few studies that have examined how Palliative Care Consultation (PCC) impacts quality of end-of-life care (EOLC) as delivered in the Intensive Care Unit (ICU).

**Research Objectives.** Determine whether PCCs improve quality of EOLC in the ICU, compared to no consultation. Secondary outcome was to determine whether early PCC ( $\leq 72$  hours of ICU stay) improves the quality of EOLC in the ICU compared to late PCC ( $> 72$  hours).

**Methods.** Quality of EOLC for adults who passed away during an ICU admission was measured using chart metrics through retrospective analysis, and four metrics were chosen to create a scoring system. One point each was awarded for documentation of (a) use of palliative medications at the time of death or extubation, (b) inclusion of social and spiritual support, (c) clarification of decisional apparatus and (d) family meetings; for a maximum score of 4.

**Results.** Of the 63 patients that were included, 31 had a PCC, and 32 had none. The primary outcome of quality score was significantly higher for PCC, compared to no consultation (median 2 vs 1; p=0.022). PCCs were associated with a 30% higher frequency of documentation of symptom-specific care plans (p<0.05 each), and higher rate of documentation of decisional apparatus within 24 hours of ICU admission (80.65% vs 50%, p= 0.038) compared to controls. Subgroup analysis demonstrated that early PCC was associated with a significantly higher score compared to late PCC (median 3 vs 1; p<0.05).

**Conclusion.** PCCs are associated with a comprehensive, timely and organized approach to end of life and therefore an inferred higher quality of EOLC in the ICU as demonstrated through retrospective chart analysis.

**Implications for Research, Policy, or Practice.**

Our simple scoring system for EOLC in the ICU was piloted to assess quality; further prospective studies are needed to validate its use and to further investigate the role of early vs. late PCCs.

**Healthcare Utilization Impact of Concurrent Palliative Care and Oncology Services Among Older Patients (S748)** 

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*Objectives*

- Describe characteristics in geriatric versus non-geriatric oncology patients.
- Describe trends in healthcare utilizations among oncology patients.

**Original Research Background.** Despite data supporting integration of palliative care (PC), the number of available cancer therapeutics creates challenges in determining timing for referrals. As a result, PC services are under-utilized and referral to hospice occurs late for many cancer patients. Veterans however are a unique population in that palliative and hospice services can be provided concurrently with active oncologic care.

**Research Objectives.** To analyze treatment trends and additional referrals among geriatric oncology patients in regards to referral practices to PC/hospice services and healthcare utilization.

**Methods.** This is a retrospective chart review of consecutive medical oncology consults at a tertiary VA hospital from July 01, 2010 through June 30, 2011. Data includes demographics, cancer treatment history and utilization information (PC/hospice referrals, ED visits, hospitalizations, among others). Variables were collected and censored on July 01, 2016.

**Results.** N=490, 277 (56.5%) subjects age  $\geq 65$  (OA) and 213 (43.5%) subjects age  $< 65$ . OA were more likely to be male (97.1% vs 87.3%,  $p < 0.01$ ), have a faculty primary oncologist (43.9% vs 22.8%,  $p < 0.01$ ) and have lung (28.9% vs 16.9%,  $p < 0.01$ ) or genitourinary (25.63 vs 17.84,  $p = 0.04$ ) cancer than non-OA. There were no differences in cancer stage, metastasis, number of lines of chemotherapy, referral practices (PC, hospice, psychiatry, nutrition, or physical/occupational therapy), ED visits, or hospitalizations. However, non-OA were more likely to have active cancer (90.3% vs 82.8%,  $p = 0.02$ ) and die during their ultimate admission (17.8% vs 10.2%,  $p = 0.02$ ).

**Conclusion.** The results showed similar oncologic management between geriatric and non-geriatric populations except during the ultimate admission where younger patients were more likely to die. PC services were utilized among both age groups. Additional research is required to determine if this difference is related to patient complex characteristics or provider factors.

**Implications for Research, Policy, or Practice.**

Identifying trends in geriatric and non-geriatric patient healthcare utilization will help increase the role of concurrent services, including early provision of PC.

**Focus Group Findings on Needs and Supports for Family Caregivers Caring for a Family Member with Cognitive Impairment (S749)** 

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*Objectives*

- Identify the top challenges and knowledge gaps of family caregivers caring for an individual with dementia gathered through market research.
- Identify how caregiver's would like to be perceived and the type of resources they would like to have based on results of market research.

**Original Research Background.** To develop educational course content for healthcare providers on supporting caregivers of individuals with dementia, we conducted formative research into the current challenges, experiences and knowledge gaps of family caregivers.

### Research Objectives

- Understand the challenges and experiences of family caregivers.
- Understand caregivers' preferences for receiving information.

**Methods.** Public Opinion Strategies conducted four in-person focus groups (n=36) and an online focus group (n=20) with family caregivers. Family caregivers were unpaid relatives, partners or friends who currently or in past year, help care for a family member or friend with dementia, Alzheimer's disease, stroke or Parkinson's disease. Participants were recruited through existing panel and provided consent. Caregivers were asked about experiences, challenges and needs, gave feedback on online resources, and ranked images of caregivers that resonated with their experience. Caregivers were asked open ended questions and completed written exercises independently.

**Results.** Caregivers' biggest challenges included managing schedules and the emotional toll and stress of caregiving. They wanted information about how to manage behavioral changes such as screaming, aggression, agitation, paranoia, hallucinations, restlessness, wandering, and late-day confusion. They felt they lacked understanding of what to expect at illness stages, coping with other medical conditions, managing medications, and talking with doctors. When asked about resources, family caregivers wanted to connect with other caregivers. Caregivers rated images more highly when they depicted the caregiver and their loved one demonstrating love and support, compared to images perceived as showing people distressed or worried.

**Conclusion.** Focus groups identified gaps in understanding how to deal with the symptoms associated with dementia as well as knowing disease progression. Caregivers emphasized a desire to connect with other caregivers to share knowledge and emotional support and preferred accessing online resources.

**Implications for Research, Policy, or Practice.** Findings will be used to develop course training for healthcare providers in the clinical and operational aspects of caring and supporting family caregivers.

### Impact of Goals of Care upon End-Of-Life Care Planning (S750)



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#### Objectives

- Describe the demographics of deceased patients with a diagnosis of lung or GI cancers.

- Understand the differences in advance care plans and end-of-life resource use between patients with divergent goals of care (quality of life versus survival).

**Background.** Knowledge of patients' goals of care can help guide treatment decisions. Our objective is to examine whether there are differences in advance care plans and resource use at end of life (EOL) between those who identify goals of care focused heavily upon survival versus quality of life (QOL).

**Methods.** This study was a longitudinal, descriptive study design. Subjects were interviewed every 3 months until death and asked to indicate their current goals of care. Anchors on the scale were QOL and survival—with a value of 50 indicating a goal with equal weight given to both domains. Values >50 indicated a goal of care that was focused more on survival than QOL. The goals of care data used for this analysis were those obtained closest to the subject's death.

**Results.** In this sample of 68 patients with advanced cancer, the majority of the sample were Caucasian (63.2%), male (54.4%), had a diagnosis of GI cancer (66.2%), had an advance directive (60.3%), and were enrolled in palliative care (57%). The mean age of the sample was 63.3 (11.6) with a range of 36-85 years. There were no associations found between patient goals of care and age, advance directives, race, or palliative care. In order to examine those at the tails of the goals of care scale, we chose to compare resource use between those in the upper tertile (survival) and those in the lower tertile (QOL). Those in the lower tertile were more likely to enroll in hospice ( $X^2(1)=3.886$ ,  $p=.049$ ) but there was no difference in number of hospitalizations in the last 30 days of life between those in the upper and lower tertiles,  $p=1.00$ .

**Conclusion/Implications.** Gathering data on patients' goals of care can enhance the likelihood of initiating conversations and providing patients with the care they desire at EOL.

### What Can Families Expect? Outcomes After Palliative Extubation in Seriously Ill Patients (S751)



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#### Objectives

- Verbalize understanding of how long after palliative extubation do patients expire.
- Learn the various facilities patients were discharged to after palliative extubation.

**Original Research Background.** For seriously critically ill elderly patients on mechanical ventilation, prognosis for significant recovery may be minimal. These individuals, or their surrogates, may decide for “palliative extubation.” A common prognostic question arises: “How long does she/he have?”

**Research Objectives.** This study describes demographics, mortality, time to death and sites of disposition after palliative extubation.

**Methods.** Retrospective 7-year study in an urban community hospital with an ethnically diverse, elderly population. We reviewed patients post palliative extubation, time to death or survival to discharge.

**Results.** 435 subjects underwent palliative extubation. Mean age: 78 years, 60% Female, ethnically diverse with 46% White and 54% others. Post extubation, 304 (70%) died in-hospital while 131 (30%) survive to be discharged. Among the patients who were discharged, 88 (72%) were discharged to in-patient hospice, 24 (20%) to home hospice, and 10 (8%) were discharged to other care settings such as short-term rehab or nursing home with comfort care. Of those who died, the mortality rates were: 72% died within 24 hours post extubation and 28% more than 24 hours. Of those who died, median time to death 8.4 hours (range 1 minutes-16.7 days).

**Conclusion.** Palliative extubation at end of life was an option selected by an ethnically diverse, elderly population. Our analysis showed that while 70% died in hospital, 30% were discharged alive. These results are helpful for counseling families and for anticipatory guidance and planning.

**Implications for Research, Policy, or Practice.**

These results are helpful for counseling families and for anticipatory guidance and planning. As well as guidance for providers taking care of these seriously critically ill pts on mechanical ventilation.

***Methylphenidate for Cancer-Related Fatigue in Children Receiving Pediatric Palliative Care (S752)*** 

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**Objectives**

- Describe patterns of methylphenidate administration in children with cancer related fatigue.
- Delineate patterns of side effects among children who received methylphenidate for cancer related fatigue.

**Original Research Background.** Methylphenidate (MPH) is a common symptomatic treatment of cancer-related fatigue (CRF). However, little evidence guiding its use for CRF in children exists.

**Research Objectives.** To describe characteristics, efficacy and side effects of MPH in children with CRF.

**Methods.** A retrospective chart review was conducted for children who received cancer related care at a large academic center (January, 2000-June, 2015), were followed by the pediatric palliative care team and prescribed MPH for CRF. Child demographic and clinical characteristics were abstracted as were data related to concomitant opioid use. Clinician descriptions of fatigue prompting MPH treatment were collected, along with data regarding MPH efficacy and side effects. Results were summarized with descriptive statistics including frequencies and measures of central tendency.

**Results.** A total of 63 patients, 49% female, median (IQR) age 16 (13-19) were identified. About half (54%) had solid tumors; fewer had a brain tumor (22%), hematologic malignancy (19%) or hematopoietic stem cell transplant (5%). Over half (59%) received chemotherapy and 14% received radiation 2 weeks prior to initiating MPH. Many (68%) were on opioids at the time of MPH initiation.

Patients started MPH a median (IQR) of 23 (8.4-36.5) months after cancer diagnosis and a median (IQR) of 3 (1-7) months before death. The mean (SD) starting dose of MPH was 0.22 mg/kg (0.17). The majority (90%) had a documented reduction in CRF. Among those who reported improvement, over half (51%) did not require any subsequent dose adjustment. Fourteen children reported a total of 18 side effects. The most common side effects were mood disturbance (6 reports); headache, sleep disturbance, anorexia and increased focus (2 reports each). Five children discontinued MPH due to intolerable side effects.

**Conclusion.** Methylphenidate was effective and well tolerated by children with CRF.

**Implications for Research, Policy, or Practice.**

MPH is a promising agent in the treatment of CRF in children and its use warrants greater consideration.

***Impact of Palliative Care Consultation on Code Status Among Patients Receiving Chemotherapy at End of Life (S753)*** 

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#### Objectives

- Describe patterns of receipt of chemotherapy at the end of life among patients with hematologic malignancies.
- Describe PC utilization among patients with hematologic malignancies at the end of life.

**Original Research Background.** Patients with hematologic malignancies have more aggressive care at the end of life (EOL), including chemotherapy, when compared to solid tumor patients. Early palliative care (PC) involvement is associated with improved patient outcomes, but these consults often occur late or not at all.

**Research Objectives.** We sought to evaluate the impact of PC involvement on code status in patients who received chemotherapy at EOL.

**Methods.** We reviewed electronic medical records of in-hospital cancer patients who died in 2014 within 2 weeks chemotherapy receipt. We identified demographic and clinical factors, PC involvement, and patterns of care at EOL in solid and hematologic malignancy patients.

**Results.** Of 67 patients identified, 64% had a hematologic malignancy while 36% had a solid malignancy. PC was consulted for 83% of solid tumor patients and 58% of hematologic patients. The median time between admission and PC consultation was longer for hematologic patients (10.5 days) than for solid tumor patients (3 days). Although rates of Do Not Resuscitate (DNR) orders were the same for hematologic (83.7%) and solid tumor patients (83.3%) at time of death, PC consultation increased uptake of DNR status for both groups (88% and 100%, respectively).

**Conclusion.** Patients with a hematologic malignancy are more likely to receive chemotherapy at the EOL. PC consultation is less likely to occur among these patients; however, it is associated with an increased rate of DNR status at the time of death.

#### Implications for Research, Policy, or Practice.

Given the distinct and sometimes unpredictable course of hematologic malignancies, unique trigger consult criteria are needed to increase PC utilization and address code status in these patients.

#### *A Qualitative Study on Inappropriate ICU Admissions: One Step Closer to Preventing Inappropriate ICU Care (S754)*

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Janine Bruce, DrPH, Stanford University School of Medicine, Palo Alto, CA. David Magnus, PhD, Center for Biomedical Ethics Stanford University, Stanford, CA.

#### Objectives

- Understand the factors that influence and lead to inappropriate ICU admissions
- Describe strategies that could prevent inappropriate ICU admissions.

**Original Research Background.** Critical care medical societies outline comprehensive guidelines to identify non-beneficial treatment within the ICU, yet these guidelines do not specify formal criteria for inappropriate ICU admissions.

**Research Objectives.** Using qualitative research methods, this study explores the causes of inappropriate ICU admissions to learn how to best prevent them.

**Methods.** Critical care, hospital, and emergency medicine physicians from a quaternary care hospital were recruited to participate in semi-structured qualitative interviews. The interview explored the physician's role in ICU admissions, considerations surrounding inappropriate ICU admissions, and a hypothetical scenario of a patient with end stage heart failure presenting to the ED in extremis. Authors (RM, KEK) collaboratively conducted thematic analysis through an iterative process of coding and identification of overarching patterns and themes, with input from the entire analysis team to further refine findings.

**Results.** A total of 25 attending physicians and critical care fellows were interviewed. Major themes included: 1) Expected clinical trajectories can be challenging to gauge under pressure to make a decision of ICU admission within the facility and with limited information in an inter-facility transfer; 2) Trainees triage more towards admission than attendings and systematically serve as the major gatekeeper for intrafacility ICU admissions; 3) Lack of advance goals of care discussions in patients with serious illness prior to life-threatening clinical decompensation and the ICU serving as a repository for goals of care discussions.

**Conclusion.** There are significant challenges in preventing inappropriate admissions to the ICU due to prognostic uncertainty and the perceived lack of advance conversations regarding the risks and benefits of the ICU in the context of overall goals of care.

#### Implications for Research, Policy, or Practice.

Augmenting ICU admission policies to include relative contraindications would provide more guidance and trigger discussions regarding the benefits of ICU admission.

### ***Palliative Procedures in Interventional Radiology (S755)***



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#### *Objectives*

- Learn about the prevalence and characteristics of the palliative procedures performed by Interventional Radiology.
- Understand how Interventional Radiology practitioners might become formidable allies in improving symptoms and function for patients with advanced illness.

**Original Research Background.** Many of the procedures performed by an Interventional Radiology (IR) department are palliative in nature. With less toxicity and risk, IR procedures are ideal for patients with advanced illnesses seeking improvement in symptoms or function.

**Research Objectives.** We aim to quantify and describe the palliative procedures performed by an IR department at a tertiary care hospital.

**Methods.** We retrospectively reviewed the electronic medical record to identify palliative procedures performed in the IR department between April and June of 2017 and whether the patient had seen a Palliative Care (PC) practitioner. We considered a palliative procedure to be any intervention with the primary purpose of alleviating symptoms associated with chronic illness. Data were analyzed using descriptive statistics.

**Results.** Of the 1,100 procedures performed by IR, 142 (13%) were palliative. Of all palliative procedures, paracentesis was the most commonly performed (60%), followed by long-term drainage catheters (13%), biliary drains (9%), thoracentesis (8%), and chest tubes (5%).

The average age of patients receiving a palliative procedure was 59 (23-84) and 77 were female (54%). Cancer was the most common disease requiring a palliative procedure (65%), with liver disease (20%) and cardiac disease (8%) as the next most frequent causes. Half were performed as an outpatient (50.7%) while only 5 procedures were performed on an ICU patient.

Of palliative procedures, 5.6% had a DNR order in the chart and 33% ultimately had a PC consultation.

**Conclusion.** A significant number of procedures performed by an IR department can be considered palliative. Of these, 33% ultimately had a PC consultation.

#### **Implications for Research, Policy, or Practice.**

Given the large number of palliative procedures performed by IR, further research should determine how educating IR practitioners in generalist PC impacts outcomes for patients with advanced illness.

### ***Do Paid Caregivers Help Homebound Patients Manage Symptoms? (S756)***



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#### *Objectives*

- Characterize the roles that paid caregivers play when the seriously ill homebound patients they care for experience symptoms.
- Describe communication between paid caregivers and a patient's family and healthcare providers in response to symptoms in seriously ill homebound patients.

**Original Research Background.** Seriously ill homebound patients experience multiple chronic conditions, significant functional impairment, and high symptom burden. Many rely on paid caregivers (PCGs) to remain comfortably at home. These PCGs are the "boots on the ground" who are present when patients are their sickest and most symptomatic. Yet little is known about how PCGs help these patients manage symptoms or communicate with their families and healthcare team about needed care.

**Research Objectives.** The goal of this project was to examine patient, proxy, and PCG perspectives about the role that paid caregivers play in the care of seriously ill homebound patients.

**Methods.** We identified seriously ill homebound patients who had a PCG for at least 6 months for at least 8 hours per week. We recruited both patients (or their proxies if they lacked capacity) and their paid caregivers and conducted separate, semi-structured interviews lasting approximately 45 minutes with each interviewee. Interviews were analyzed using thematic analysis.

**Results.** Seriously ill homebound patients experienced significant symptoms. Patients, proxies, and PCGs identified several ways PCGs act to help manage patient symptoms: monitoring for symptom worsening, advocating for proper treatment of symptoms, and providing interpersonal support. PCGs routinely communicated with patients' healthcare providers about symptoms or worrisome health changes. Some communicated only in times of crisis, but others communicated on a regular basis.

**Conclusion.** Paid caregivers play an important role in helping seriously ill homebound patients manage symptoms and get the supportive care that they need.

#### **Implications for Research, Policy, or Practice.**

PCGs should be considered as part of the team of caregivers and health professionals who

work together to keep seriously ill homebound patients comfortable at home. Interventions to improve symptom management among functionally impaired patients like the homebound should include training and support for their PCGs and emphasize the importance of communication with the healthcare team.

**Positive Optimism and Palliative  
Chemotherapy: Does It Really Effect Symptom  
Burden? (S757)** 

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*Objectives*

- Better communication
- Analysis on multiple occasions

**Original Research Background.** Optimism, a positive trait of human personality, has been linked to lower pain level and psychological stress in patients with chronic illness.

**Research Objectives.** The purpose of this study is to determine correlation between dispositional optimism and symptom burden in palliative care (PC) patients. We hypothesize that higher dispositional optimism equates to lower symptom burden.

**Methods.** Dispositional Optimism scores were measured using the revised "Life Orientation Test" (LOT-R) in a set of PC male patients (ages 30-89) in VA PC clinics. LOTR scores were correlated against "Edmonton Symptom Assessment Score" (ESAS). Age, gender, ethnicity, diagnosis, and presence of depression data was collected. Differences in LOTR and ESAS scores were measured among variables.

**Results.** Cronbach alpha of  $>0.85$  for survey was used. Participants (N= 34) were 82%  $>60$  years old, 76% Caucasian, and 67% Non-Hispanic/Latino. Seventeen participants had cancer, 3 COPD, 1 CHF, 3 ESRD, and 8 other terminal diseases. Optimism scores were higher in non-white (18 vs.14,  $P=0.04$ ) and cancer (16 vs.13,  $P= 0.04$ ). Optimism was higher in cancer with chemotherapy vs. without (19 vs. 13,  $P=0.004$ ) but no significant difference in ESAS (32 vs. 38). There was a nonsignificant negative correlation between LOTR vs. ESAS and PHQ2 vs. optimism scores. A strong positive correlation was found between PHQ2 and ESAS ( $P=0.001$ ).

**Conclusion.** In PC patients, symptom burden did not correlate with optimism. Results support a model in which optimism is a variable trait affected by external factors. Specifically, higher optimism in non-white patients may be attributed to spiritual/cultural

differences. Higher optimism in cancer patients versus chronic diseases may be attributed to perceived curative potential and availability of therapeutic options. This suggests the need for improved communication with patients throughout the course of their disease. Higher symptom burden is correlated with increased depression as expected.

**Implications for Research, Policy, or Practice.** Future direction includes collecting optimism scores on multiple occasions during treatment course to determine whether it impacts symptom burden.

**Attributes of Primary Care Physicians  
Associated with Engaging Patients in Advance  
Care Planning: Analysis of US Physicians  
Responses from International Survey (S758)** 

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*Objectives*

- Describe the frequency with which US primary care physicians report having routine ACP conversations with older or sicker patients.
- Identify attributes of primary care practice associated with physician-patient ACP conversations.

**Original Research Background.** Sparse data exist concerning frequency of advance care planning conversations (ACPC) by primary care providers (PCP) and practice attributes facilitating ACPC.

**Research Objectives.** To analyze US PCP characteristics and primary care practice attributes associated with ACPC.

**Methods.** We analyzed US PCP responses from the 2015 Commonwealth Fund International Survey of Primary Care Doctors. Main outcome was PCP report of frequency of ACPC with older or sicker patients. Variables included physician and practice characteristics, stress related to practice, and reimbursement mechanisms. We performed bivariate analyses using chi square analyses; variables with significant associations ( $p<0.05$ ) were included in multivariable logistic analyses.

**Results.** Of 977 US PCPs, 458 (47%) reported routine ACPC with older or sicker patients. Those 45+ years (73%) or male (60%) were more likely to have ACPC ( $p<0.001$ ). ACPC were most common in cities, least common in rural locations, and negatively associated with suburban practices ( $p<0.001$  overall). PCPs seeing patients with multiple chronic conditions (83%) or palliative needs (22%) and home visit providers (39%) were more likely to have ACPC ( $p<0.001$ ). Being part of an Accountable Care Organization was associated with ACPC ( $p<0.01$ ), while Patient-Centered

Medical Home practices and integrated healthcare systems were not. All reimbursement mechanisms (e.g. fee-for-service, capitation, salary-based) were associated with ACPC. 44% of PCPs considered their work stressful, which was negatively associated with ACPC ( $p < 0.01$ ). Multivariable logistic modeling ( $N = 726$ ) identified seeing patients with multiple chronic conditions, seeing patients with palliative care needs, providing home visits, and capitation as independently associated with ACPC ( $p < 0.001$ ).

**Conclusion.** Among PCP and practice attributes, seeing patients with multiple chronic conditions or palliative care needs, and providing home visits are strongly associated with having ACPC with older or sicker patients.

**Implications for Research, Policy, or Practice.**

Systematizing ACPC in primary care should start by focusing on patients with multi-morbidity.

**The Use of Personalized Pain Goal in Routine Pain Assessment Among Outpatients with Advanced Cancer (S759)** 

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*Objectives*

- Learn about the different ways to assess pain management outcomes.
- Compare the different types of assessing pain outcome measures.

**Original Research Background.** There is no universally accepted definition for measuring pain outcomes in cancer pain management. The personalized pain goal (PPG) has been shown to be a relevant measure in assessing pain control outcomes among patients with cancer.

**Research Objectives.** In this study, we examined the use of the PPG in routine outpatient practice and compared it with a different pain outcome measure, the pain treatment response.

**Methods.** Initial and follow up clinical information of 387 eligible supportive care outpatients were retrospectively reviewed and analyzed. Achievement of PPG was defined as pain  $\leq$  PPG and pain treatment response as  $\geq 30\%$  or  $\geq 2$  point pain reduction.

**Results.** PPG was successfully completed in 375/387 (97%) of all patients with cancer pain. The median

baseline PPG was 3 for all patients, 2 for mild pain (1-3), 3 for moderate pain (4-6), and 3 for severe pain (7-10). Multivariate analysis indicated that the odds ratio of failure to achieve the PPG at the first follow up visit was 1.01 with higher morphine equivalent opioid dose ( $p = 0.0005$ ), 1.46 with higher number of adjuvant use ( $p = 0.006$ ), 2.62 with severe pain ( $p = 0.006$ ), 1.79 with severe depression ( $p = 0.009$ ), and 1.02 with higher total symptom distress score ( $p = 0.003$ ). Using the PPG as the gold standard, the overall sensitivity and specificity of pain treatment response were 83% and 77% respectively. The sensitivity/specificity in patients with baseline mild, moderate, and severe pain were 78%/100%, 75%/89%, and 100%/60% respectively.

**Conclusion.** PPG was successfully completed in the majority of patients, suggesting its utility as a standard pain outcome measure in routine clinical practice. Patients with higher opioid use, higher number of adjuvant use, severe pain, severe depression, and higher overall symptom burden were less likely to achieve their personalized pain goals.

**Implications for Research, Policy, or Practice.**

The results will help with better assessment of pain outcomes and eventually improve cancer pain management.

**Association Between Religiosity and Advance Directive Completion in a Nationally Representative Sample (S760)** 

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*Objectives*

- Describe the relationship between religious service attendance and strength of religious beliefs and advance directive completion.
- Understand the relationship between religious service attendance and strength of religious beliefs on end of life care preferences.

**Original Research Background.** Studies have shown that individuals with high religiosity are more likely to choose aggressive care at end of life (EOL). However, less is known about the association between religiosity and advance directive (AD) completion.

**Research Objectives.** To investigate the association between religious service attendance, importance of religion, advance directive completion, and documented preferences for EOL care (prolonged/aggressive care vs. limited care, comfort care, or care withheld), using a nationally representative sample from the Health and Retirement Study Core and Exit interviews conducted between 2000 and 2014.

**Methods.** We conducted descriptive analyses with data compiled from 10,592 participants and from

proxies following participant death. Next, we conducted logistic regression analysis to determine the predictors of advance directive completion, and among those with directives, the predictors of electing prolonged/aggressive care at EOL.

**Results.** More than half (59.0%) of decedents attended religious services in the years preceding death and 86.9% reported that religion was important to them. Less than half (44.4%) had completed an advance directive, and of those, 5.7% elected aggressive care. Decedents who attended religious services had higher odds for AD completion. Conversely, those who reported that religion is important had lower odds for AD completion. Patients who attended religious services at least once a year but less than once a week were more likely to elect prolonged/aggressive care.

**Conclusion.** The findings suggest a difference between religious practice and strength of belief when completing advance directives, and EOL care preferences.

**Implications for Research, Policy, or Practice.**

More research is needed to understand how religious attendance and the strength of religious beliefs influence individuals' EOL behaviors and care preferences. Physicians should be aware of the potential for religious service attendance and beliefs in care decisions.

***Malignant Pain in the Opioid Epidemic: An Unregulated Malady (S761)*** 

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*Objectives*

- Describe the state of the opioid epidemic in the United States.
- Identify current opioid prescribing regulations in place for prescribers taking care of patients with serious illness.
- Identify differences in screening habits and knowledge of current laws and regulations in prescriber groups caring for distinct populations.

**Original Research Background.** Responding to an epidemic of opioid related deaths, guidelines and laws have been implemented to promote safety. While efforts focus on non-malignant pain, most misused opiates come from friends, family, or legal prescriptions.

**Research Objectives.** This study evaluates differences in screening and knowledge of laws between providers treating cancer versus congestive heart failure (CHF).

**Methods.** We adapted a survey with questions regarding screening practices, knowledge of opioid prescribing laws, and provider education from Blackhall, et al. Surveys were distributed in March 2017 to

oncology and CHF clinicians at the University of Virginia. We used chi-square tests for categorical variables and t-tests and for continuous variables.

**Results.** Forty-six of 129 (35.6%) oncology providers and 9 of 14 (64.2%) CHF providers responded with usable survey results. Routine screening was rare in both groups, with 28.3% of oncology and 14.3% of cardiology providers routinely screening patients for substance abuse ( $p=0.053$ ). Only 19.6% of oncologists reported always using the prescription monitoring program (PMP), while 71.43% of cardiologists reported always using it ( $p=0.014$ ). 66.67% of oncology providers never used a urine drug screen (UDS), while 86.7% of cardiologists reported using it "when indicated" and 14.3% never used it ( $p=0.0086$ ). Screening of family members was rare, with 34.78% of oncologists and 57.14% of cardiologists reporting never screening family ( $p=0.317$ ). Knowledge of laws was similar between groups, with 14.29% of cardiology and 17.39% of oncology providers reporting no knowledge of opioid prescribing laws ( $p=0.2869$ ). Only 34.78% of oncology providers were able to identify current laws.

**Conclusion.** Routine screening of patients and family for substance abuse risk was uncommon for both groups, but cardiology providers were more likely to use the PMP or UDS. Knowledge gaps regarding Virginia laws were noted in both groups.

**Implications for Research, Policy, or Practice.**

Improved education regarding best practices, laws, as well as programs to promote screening, are needed for providers.

***Concurrent Use of Opioids and Benzodiazepines or Non-Benzodiazepines Sedative Hypnotics Among Cancer Patients Referred to Outpatient Palliative Care Clinic of a Comprehensive Cancer Care Center (S762)*** 

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*Objectives*

- Discuss the risk involved in prescribing concurrent use of opioids and benzodiazepines.
- Discuss the palliative care role in simplifying polypharmacy.

**Original Research Background.** Benzodiazepines (BZD) and non-benzodiazepines sedative hypnotics (S/H) have the potential for sedation and respiratory depression when prescribed concurrently with opioids. There is paucity of literature on the frequency and the effects of this concurrent use among cancer patients.

**Methods.** This is a retrospective review of 2000 randomly selected patients (250 patients each year) seen as first consultation between January 1, 2009 and December 31, 2016. Patients were included if they had a diagnosis of cancer either local, advanced, or metastatic disease, were 18 years or older, and were on any opioids. We compared 300 randomly selected patients with concurrent use of opioids and BZD or S/H with 300 randomly selected patients on opioid only. We also collected data at first follow-up visit among eligible patients. Descriptive statistics and Wilcoxon rank sum test were used for analysis.

**Results.** Ninety-six out of 221 (43%) patients were on concurrent BZD or S/H during 2011 Vs 67 out of 217 (31%) in 2016 ( $P=0.028$ ). Out of 600 patients reviewed for secondary analysis; Median MEDD was statistically higher among patients with concurrent use of opioid with BZD or S/H (75 mg/day IQR [40, 145] versus opioid only group (60 mg/day IQR [30, 150];  $P=0.009$ ) upon referral. At first follow up, patients among concurrent use group, half 142 (47%) stopped BZD or S/H.

**Conclusion.** Concurrent use of opioids and BZD or S/H has declined in recent years among patients seen at supportive care clinic of a comprehensive cancer center. Concurrent use group received a higher MEDD. After one supportive care consult, half of the patients successfully discontinued BZD or S/H.

**Implications for Research, Policy, or Practice.** Earlier involvement of a palliative care team in care of cancer patients can assist with simplifying poly-pharmacy especially reducing the rate of concurrent use of opioids and BZD or S/H.

### ***The End-of-Life Experience for International Patients: Review from a Destination Medical Center (S763)***

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#### *Objectives*

- Recognize the unique nature of the population of seriously ill international patients.
- Review the end-of-life experience of seriously ill international patients at a major US referral center.

**Original Research Background.** Patients from all over the world travel to the United States to receive medical care. Seriously ill international patients and their

families may face barriers to goal concordant end-of-life (EOL) care, especially those whose illness severity prevents a return to their home country. Little is known about the EOL experiences of this diverse group.

**Research Objectives.** This review was designed to characterize the EOL experiences of all international patients that died at Mayo Clinic Rochester, a tertiary care academic medical center with a large international referral base, from 2005-2015.

**Methods.** After institutional review board approval, charts in the electronic medical record were reviewed for patients that died from 01/01/2005-12/31/2015 with a primary address outside of the United States. Data were abstracted and analyzed with standard statistical methods.

**Results.** Eighty-two ( $n = 82$ ) international patients meeting the inclusion criteria died at Mayo Clinic between 2005-2015 with a median age at death of 59.5 years (range 21-88). Forty-eight patients (59%) were male, and the top three countries of origin were Saudi Arabia ( $n = 20$ ), Kuwait ( $n = 16$ ), and Canada ( $n = 9$ ). The median length of the terminal hospital stay was 13 days (range 1-231 days). Nine patients (11%) had completed an advanced directive and 74% of patients had a DNR status at time of death. Thirty-four patients (42%) received palliative medicine consultation during terminal admission at a median of 8.5 days before death.

**Conclusion.** Most changes to resuscitation preferences occurred during terminal hospitalization; three patients (4%) had do not resuscitate (DNR) status on admission and 61 patients (74%) were DNR at time of death. Compared to other published datasets of American patients, our cohort demonstrated a much lower completion of advance directives (11%).

**Implications for Research, Policy, or Practice.** Further research is needed to explore and clarify the unique needs of seriously ill international patients.

### ***Palliative Care for Neurosurgery Patients (S764)***

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#### *Objectives*

- Recognize the characteristics and outcomes of Neurosurgery patients who received a Palliative Care consult.
- Discuss how the outcomes data can inform future practice and opportunities for collaboration with Neurosurgical providers.

**Original Research Background.** Palliative Care (PC) is consulted less frequently for hospitalized patients requiring neurosurgical intervention than for

patients with other critical illnesses. Reasons for this may include relatively less symptom burden, and differences in medical culture between Neurosurgery and other critical care services.

**Research Objectives.** We aimed to examine the characteristics and outcomes of patients who received PC consultation while admitted to the Neurosurgery service at an academic tertiary care hospital.

**Methods.** A retrospective chart review was performed on all patients admitted to the Neurosurgery service who received a PC consultation between July, 2016 and March, 2017. Data were collected from PC assessments and from the electronic health record and analyzed using descriptive statistics.

**Results.** Twenty-six patients admitted to the Neurosurgery service received Palliative Care consultation between July, 2016 and March, 2017.

The major reason for PC consultation was to define goals of care (92%). While many patients died in the hospital (38%) or were discharged to hospice (19%), many were discharged to home (8%) or a nursing/rehab facility (35%).

Average time to PC consultation was 7.7 days from admission while length of stay was 17.2 days. Length of stay for early PC consultation ( $\leq 4$  days) was 10.1 days, while length of stay for late ( $> 4$  days) PC consultation was 19.8 days; this difference was not statistically significant.

**Conclusion.** PC was primarily consulted to help clarify goals of care and may result in decreased hospital length of stay. The data suggest that calling PC need not be the consult of last resort and can offer patients and their families an abundance of resources.

**Implications for Research, Policy, or Practice.**

Patients can benefit from a PC consult even if they will eventually be discharged with intent to rehab. Future research should investigate how to best integrate PC consultation in neurosurgical practice.

***Exploring Approaches to the Management of Acute Neoplasm Related Pain in Patients on Buprenorphine or Methadone for Opioid Dependence (S765)*** 

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*Objectives*

- Discuss the common barriers and challenges in managing acute neoplasm related pain in patients on Buprenorphine or Methadone for Opioid Dependence.
- Describe published therapeutic approaches in the management of acute pain in opioid dependent patients.

**Background and Objective.** Opioid abuse is a devastating, costly, and growing problem in the United States. To improve access to addiction treatment buprenorphine has become widely available. Data on best strategies in treatment of cancer pain in patients on buprenorphine or methadone for addiction are lacking. Optimal acute neoplasm related pain management in opioid dependent patients with cancer is a clinical challenge in both inpatient and outpatient settings due to balancing concerns for exacerbating physical dependence while avoiding under-treatment.

**Study Identification.** We performed a systematic review using an electronic search strategy on published articles in the past 20 years.

**Data Extraction and Synthesis.** We tabulated the challenges and recommendations that were discussed. Using these principles, we report on the clinical challenges and outcomes of two patients with acute cancer related pain who were on chronic opioid maintenance with methadone or buprenorphine respectively whose acute pain crisis was successfully managed in the inpatient setting.

**Results.** The reviewed articles reflected various approaches with two common themes which included either (1) maintaining the patient on their chronic maintenance drug while adding additional opiates or (2) altering the daily dosage of the chronic maintenance drug by adjusting the frequency or temporarily remove the maintenance drug until acute pain resolves and then reintroduce it. In our encountered cases of opioid dependent patients with acute cancer pain and chronic opioid maintenance, the acute pain was managed in the hospital setting by providing additional opiates for breakthrough along with continued supervision and support with close outpatient follow up.

**Conclusions and Implications for Practice, Policy, and Research.** Effective pain management strategies involve proper pharmacological support and assistance from an interdisciplinary team to address psychosocial distress associated with coping with the illness. This work will allow researchers and health-care professionals to consider existing knowledge gaps in the field and evaluate potential for the establishment of consensus guidelines for this challenging patient population.

***Effectiveness of Subacute Rehab as a Bridge to Cancer Treatment (S766)*** 

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#### Objectives

- Describe effectiveness of SAR for patients seeking to gain strength for future cancer treatment.
- Identify baseline characteristics of patients that are less likely receive further cancer treatment after discharge to SAR.

**Background.** Patients with advanced cancer inevitably experience functional decline. Discharge to subacute rehabilitation (SAR) with the goal of gaining strength for future cancer treatment is common. However, patients may forgo hospice, and it is not known how many patients make it to oncology follow-up or receive cancer treatment after discharge to SAR.

**Aim Statement.** Our aim is describe if SAR successfully bridges patients to oncology follow-up and subsequent cancer treatment.

**Methods.** A retrospective review was conducted in the electronic medical system at MedStar Washington Hospital Center (MWHC) for cancer patients who had a palliative care consult and were discharged to SAR that admission. Baseline data collected included Eastern Cooperative Oncology Group (ECOG) performance status. Patients were excluded if they did not follow with an oncologist at the affiliated Washington Cancer Institute (WCI).

**Results.** From 2015-2017, 16 patients meeting criteria were identified. 13 (81%) of the 16 patients were discharged to SAR to improve strength. 7 (44%) saw their oncologist after discharge from SAR, of which 3 (19%) received further cancer treatment. Patients who made it to follow-up had baseline ECOG of 1 or 2. No patient with an ECOG of 2 or greater received further anticancer therapy. Eight (50%) of the patients were eventually readmitted to MWHC.

**Conclusions and Implications.** Discharge to SAR may not help patients meet the goal of gaining strength for future cancer treatment, particularly for those patients with ECOG performance status of 2 or greater. More research is needed to evaluate if and when patients these patients are referred to hospice as well as time until death. This work will assist clinicians in framing goals of care discussions for patients with advanced cancer who may be better served by hospice than SAR.

#### *Palliative Care Needs of Advanced Cancer Patients in the Emergency Department (S767)*

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School of Medicine, New York, NY. Jeffrey Caterino, MD MPH, Ohio State University, Columbus, OH. Corita Grudzen, MD, New York University Langone Health, New York, NY.

#### Objectives

- Discuss the palliative care needs among ED-presenting cancer patients.
- Discuss how palliative care needs change by geographic location and how these needs affect patient outcomes.

**Original Research Background.** Increasing Emergency Department (ED) utilization by patients with active and advanced cancer necessitates further understanding of this historically understudied population.

#### Research Objectives.

- Assess palliative care needs and patient outcomes for patients who present to the ED with advanced or metastatic cancer.
- Understand how patient factors assessed in the ED affect outcomes such as healthcare utilization and mortality and how these factors may vary with site location.

**Methods.** An observational, prospective cohort study of patients with active cancer was conducted at 18 EDs of the Comprehensive Oncologic Emergency Research Network (CONCERN). Data collection involved an in-person survey exploring patient factors including quality of life, functional status, physical and psychological symptom burden, as well as a 30-day chart review identifying patient outcomes including healthcare utilization, mortality, advance directive status and comorbidity severity. These outcomes were examined in relation to the presence or absence of palliative care services, hospice care services, advanced care planning, and geographic location among participants.

**Results.** Enrolled advanced cancer patients (n=346) had a mean ( $\pm$ SD) age of 62.2 ( $\pm$ 12.3), with 49% Male, 50% Female. In the advanced cancer population, 84% reported having not received palliative care services, and 97% reported having not received hospice services. Forty-two percent of patients did not have an advance directive of any kind.

**Conclusion.** Significant palliative care needs exist among ED advanced cancer patients.

**Implications for Research, Policy, or Practice.** This is the first multisite endeavor to characterize palliative care needs among advanced cancer patients in the ED; further research is warranted to better understand these needs.

#### *Healthcare Providers' Roles in Decision Making About Tracheostomy for Children with Medical Complexity (S768)*

Savithri Nageswaran, MD, Wake Forest School of Medicine, Winston-Salem, NC. Shannon Golden, MA,

Wake Forest University Health Sciences, Winston-Salem, NC. William Gower, MD MS, University of North Carolina School of Medicine, Chapel Hill, NC. Nancy King, JD, Wake Forest School of Medicine, Winston-Salem, NC.

#### Objectives

- Identify the roles of physicians and non-physician clinicians in the decision-making process about tracheostomy for children with medical complexity.
- Identify barriers faced by healthcare providers when guiding caregivers in decision making about tracheostomy for children with medical complexity.
- Identify potential solutions to improve the tracheostomy decision-making process for children with medical complexity.

**Original Research Background.** Children with medical complexity (CMC) receive life-sustaining treatments (LST) for survival. Guiding caregivers about LST is an important aspect of pediatric palliative care. **Research Objectives.** Describe healthcare providers' roles in the tracheostomy decision-making process for CMC.

**Methods.** This qualitative study was conducted in a tertiary care children's hospital in North Carolina between February and October 2015. Five focus groups of 33 hospital-based healthcare providers that included hospitalists, pediatric intensivists, neonatologists, pulmonologists, otorhinolaryngologists, nurses, social workers, care coordinator, and respiratory, speech and physical therapist were conducted. Focus groups were audio-recorded and transcribed verbatim. We used ATLAS.ti software to code and manage qualitative data. Recurrent themes were identified.

**Results.** Theme 1. Physicians considered many child-level factors when recommending tracheostomy: underlying condition, survival, risk of recurrent hospitalizations, and neurological impairment. Recommending tracheostomy for CMC with limited survival, perceived poor functioning and quality of life, and progressive conditions was morally and ethically difficult for clinicians. Theme 2. Clinicians considered caregivers' ability to provide complex care at home when recommending tracheostomy. Barriers to decision making were caregivers' lack of understanding of the severity of child's condition, benefits/ futility of tracheostomy, and the effect of tracheostomy on long-term care of CMC, and the influence of social media. Theme 3. Physician variability in tracheostomy recommendation was an impediment to guiding caregivers. Physicians attributed this variability to clinical uncertainty and lack of outcomes data about the effect of tracheostomy. Theme 4. Palliative care services were helpful to clinicians in the decision-making process. Bedside nurses, had information about and trusting relationship with caregivers, that were important. Physicians' engagement of non-physician clinicians in daily rounds,

and provider and family meetings were potential strategies to improve the decision-making process.

**Conclusion.** Healthcare providers play an important role in guiding caregivers in the decision-making process about tracheostomy for CMC.

**Implications for Research, Policy, or Practice.** Opportunities to improve the tracheostomy decision-making process exist.

#### **Most Impactful Factors on the Health-Related Quality of Life of a Geriatric Population with Cancer (S769)**

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#### Objectives

- Recognize the factors influencing health-related quality of life (HRQoL) in older patients with cancer.
- Identify symptoms associated with quality of life.

**Original Research Background.** As the population of older adults with cancer continues to grow, the most important factors contributing to their HRQoL remain unclear.

**Research Objectives.** The goals of this project were to 1) evaluate the relationship between quality of life and physical, psychological, social and spiritual domains, and 2) understand the relationship between of symptoms on HRQoL.

**Methods.** Older adults ( $\geq 65$  years) with cancer participated in a telephone survey (N=1,457). Outcomes were measured with the Physical Component Summary (PCS) and Mental Component Summary (MCS) scores of the SF-12.v2 instrument. Statistical techniques used to identify domains (physical, psychological, social and spiritual) most strongly associated with HRQoL included linear and conditional inference regression tree models. Models were developed in a training dataset (N=920) and performance assessed in a validation dataset (N=537).

**Results.** Respondents were a median of 19 months from diagnosis; 28.1% were on active treatment. Most relevant factors predicting PCS were symptom severity, comorbidity scores, leisure-time physical activity, and having physical support needs. Most relevant factors for MCS were having emotional support needs, symptom severity score, and number of financial hardship events. Results were consistent across modeling

techniques. Symptoms strongly associated with PCS included fatigue (adj.  $R^2=.34$ ), pain (adj.  $R^2=.32$ ), disturbed sleep (adj.  $R^2=.16$ ), and drowsiness (adj.  $R^2=.16$ ). Symptoms strongly associated with MCS included fatigue (adj.  $R^2=.23$ ), problems remembering things (adj.  $R^2=.17$ ), disturbed sleep (adj.  $R^2=.16$ ), and lack of appetite (adj.  $R^2=.16$ ).

**Conclusion.** Findings support the importance of addressing persistent symptoms, managing comorbidities, promoting leisure-time physical activity, and addressing financial challenges.

**Implications for Research, Policy, or Practice.** A long-term comprehensive approach is needed to ensure the well-being of older adults with cancer.

### *Patterns of Opioid Prescription, Utilization, and Costs Among Palliative Care Inpatients Between 2008-2014 (S770)*

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#### *Objectives*

- Determine patterns of opioid prescription and utilization among palliative care inpatients.
- Determine patterns of opioid costs among palliative care inpatients.

**Original Research Background.** There are limited data on prescription patterns and opioid cost in patients receiving palliative care.

**Research Objectives.** The aim of this study was to determine daily prescription, use, and cost of opioids per patient in a palliative/supportive care consultation service at a Comprehensive Cancer Center.

**Methods.** Medical records of 1232 cancer consecutive patients with supportive care consultations were reviewed. Eligibility criteria included referral to supportive inpatient service during the month of October every year from 2008 to 2014, and using scheduled opioids. Morphine Equivalent Daily Dose (MEDD), opioid cost per patient (\$), cost per MEDD per patient (\$), cost per MEDD per opioid (\$) were calculated.

**Results.** A total 493 patients were eligible (median was 55 years, 57% female, 91% referred for symptom management). Although the median MEDD (IQR) increased after palliative care consultation by 30 mg (0, 60) 53% ( $p<0.001$ ), the median (IQR) MEDD of opioids per person decreased from 120 mg (48.0, 240.0) in 2008 to 66 mg (45.0, 144.0) in 2014 ( $p=.054$ ). Median (IQR) opioid

cost per patient was \$28.18 (8.19, 172.1) in 2008 and \$34.31 (3.89, 258.98) in 2014 ( $p=.204$ ). Median (IQR) cost per MEDD per patient was \$ 0.17 (0.09, 0.77) in 2008 and 0.84 (0.06, 5.08) in 2014 ( $p=.192$ ), and mean cost per MEDD dose was \$1.61 in 2008 and \$2.96 in 2014. Median cost per MEDD for Methadone was \$0.06, and other opioids was \$0.259 ( $p<0.001$ ).

**Conclusion.** Although the daily opioid dose significantly increased after each palliative care consultation by approximately 53%, the daily opioid use per person decreased from 2008 to 2014. The median cost per MEDD per patient remained stable over the 7 years. The median cost for methadone was significantly lower than other opioids.

**Implications for Research, Policy, or Practice.** Over 7 years, there was a decrease in the daily opioid dose use per patient. The cost of opioids per patient remained stable over the 7 years.

### *Pediatric Intensivist End-of-Life Practices in Vietnam (S771)*

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#### *Objectives*

- Discuss end-of-life practices in tertiary care pediatric intensive care unit in Vietnam.
- Create interest in global pediatric palliative care opportunities.

**Original Research Background.** Although there has been a significant reduction in childhood mortality, Vietnam's under-five and neonatal mortality rate still stand at 22 and 11 per 1,000 live births, respectively. Few studies exist on physician attitudes towards life-sustaining treatment and decision making in the Vietnamese pediatric intensive care unit.

**Research Objectives.** This study aims at understanding pediatric intensivist perceptions, attitudes and practices surrounding the end of life in a tertiary care pediatric hospital in Vietnam.

**Methods.** A mixed-method study utilizing paper survey and semi-structured interviews were conducted at a tertiary care pediatric hospital in Vietnam. NICU and PICU physicians and nurses were included. A total of 18 interviews and 68 surveys were completed and subsequently analyzed.

**Results.** Qualitative analysis demonstrates three major themes surrounding end-of-life care: socio-economic and religious/cultural factors influence decision to withdraw treatment or not; lack of physician experience and infrastructure influence

physician decisions, and who initiates (parent vs. physician) discussion about treatment decisions influences dynamics of the end-of-life processes.

Quantitative analysis demonstrates that intensivists largely agree on involving parents in decisions to withdraw or not escalate life sustaining treatment, but not as readily with alternative resuscitation status. Intensivists find it important to try all potentially lifesaving interventions, however, the presence of a chronic medical condition may influence that decision. Most intensivists regard it as a personal disappointment if the patient dies.

**Conclusion.** Many opportunities for improvement are present for pediatric end-of-life care in Vietnam. Infrastructure and education regarding palliation in the ICU setting may be of benefit. In addition, psychosocial factors that are unique to the Vietnamese population are worth exploring as they intersect with the evolving modern medical technologies and chronically ill children.

**Implications for Research, Policy, or Practice.**

This research highlights opportunities for expanding pediatric palliative care education and practices to intensivists around the globe.

**Early Findings from Systematic Depression Screening Implemented as Part of the Oncology Care Model (S772)**



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*Objectives*

- Describe routine depression screening implemented as part of the Medicare's Oncology Care Model (OCM).
- Identify the rates or patient-reported depression within real-world oncology settings obtained as part of the OCM.
- Describe relationship between self-reported depression and performance status.

**Original Research Background.** The OCM mandates routine use of depression screening for oncology patients, providing a unique opportunity to evaluate patient-reported outcomes.

**Research Objectives.** The goals of this project were to 1) evaluate rates of patient-reported depression identified during routine screening within the OCM, and 2) assess the relationship between self-reported depression and performance status.

**Methods.** Adults with cancer (n = 489) at 2 academic institutions who completed a patient-reported depression screen were included in the analysis. Depression

was assessed using the Patient Health Questionnaire-2 (PHQ2), which expanded to the PHQ9 when indicated. Moderate and severe depression were defined as scores of  $\geq 10$  and  $\geq 20$ , respectively. Chi square tests were utilized to assess for an association between depression and performance status.

**Results.** 489 surveys were administered by the clinical team (navigator, nurse, physician) in routine practice from 10/2016-7/2017. Median age was 70 years old; 59% were female. The most common cancer diagnoses were breast (N = 68, 14.0%), ovarian (N = 53, 10.8%), and prostate (N = 42, 8.4%). One percent of patients reported severe depression and an additional 4% reported moderate depression overall. The two institutions had varying rates of moderate or greater depression (11% vs 2%). 25% of patients had a reduced performance status (2 or greater). Patients reporting moderate or severe depression were more likely to report a reduced performance status ( $\chi^2 [10] = 72.79, p < .0001, \phi = .386$ ).

**Conclusion.** Depression is associated with poorer performance status. When population-based depression screening is implemented as part of OCM, palliative care providers may see an influx of patient referred for depression.

**Implications for Research, Policy, or Practice.**

Routine screening within payment reform models, such as the OCM, will likely result in the need to develop additional palliative care services to treat depressive symptoms.

**Searching for a Standard—A Survey of Hospice Operating Practices in Michigan (S773)**



Kayla Sheehan California Northstate University, Elk Grove, CA. Maria Silveira, MA MD MPH FAAHPM, University of Michigan, Ann Arbor, MI.

*Objectives*

- Describe the variability in hospice operating practices throughout Michigan.
- Identify potential research directions to understand the mechanisms underlying variation in hospice services.

**Original Research Background.** More Americans than ever are receiving hospice care, but access to that care may not be equal. Stringent admission criteria, limitations in services offered, and rigid payment schema may limit access to hospice or compromise the care patients receive.

**Research Objectives.** Describe variation in the operating practices of hospices in Michigan and identify practices that may restrict access to hospice services.

**Methods.** We conducted an online survey of hospices in Michigan using questions developed through an iterative process involving multiple stakeholders. The survey was conducted in two parts, one for the medical

director and one for the hospice administrator. Respondents answered benchmarking to FY2016 data. Responses were tabulated.

**Results.** We received data from 49 (49%) medical directors and 39 (44%) hospice administrators. We observed variation in access to some therapies, such as palliative chemotherapy (29% did not cover), blood products (50%), hormonal cancer treatment (45%), TPN (37%), and vaccines (60%). Importantly, 20% could not support patients using methadone (20%). The reasons for not offering these treatments included: cost, perceived futility, hospice philosophy, and lack of trained staff. Most hospices (60%) reported recommending temporary disenrollment for patients to access services hospice could not provide. Most hospices lacked the ability to provide charity care (60%) or offer sliding scale payment (52%) to indigent patients. Many hospices lacked services tailored toward racial or ethnic minorities (40%).

**Conclusion.** There is variation in the kinds of services hospices in Michigan can offer. We discovered a significant proportion of hospices limit access to some palliative treatments and medications, and cannot offer support for impoverished patients or ethnic minorities.

#### **Implications for Research, Policy, or Practice.**

Further work is needed to understand what will improve access to palliative treatments through hospice. Developing and enforcing standards may not be successful if hospices lack the financial ability to pay for the services in question.

#### ***Is Nonhospice Palliative Care ‘Colorblind’? Evaluating Racial Differences in Inpatient Nonhospice Palliative Care (S774)***

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#### *Objectives*

- Recognize that there are racial differences in regards to palliative care, but research aimed at non-hospice palliative care is scarce.
- Examine racial differences that exist in an inpatient palliative care unit.

**Original Research Background.** Minorities are less likely than whites to utilize hospice services and more likely to receive medically ineffective treatments at end of life. Barriers towards hospice utilization among African Americans (AA) are well-documented, however less is known about disparities in non-hospice inpatient palliative care (PC).

**Research Objectives.** The study aim was to determine if there were racial differences in clinical care trends at an inpatient palliative care unit (PCU). We hypothesized that compared to Whites, AA would have longer hospital lengths of stay (LOS) and time until PC consultation and that these trends would improve over time.

**Methods.** We conducted a comparative cross sectional study of the UAB Center for Palliative and Supportive Care program inpatient database from October 2004 to December 2015.

**Results.** The total program sample (n=11786) was 50.1% male, 33.2% AA, and median age 64.42 years. Compared to whites, AAs were statistically younger (median age 62 vs. 66, p=.000), had longer PCU LOS (4 vs. 3 days, p=.000), had a shorter time from admission to PC consultation (3 vs. 4 days, p=.006), and were less likely to be DNR (60% vs. 72%, p=.000). Areas that remained similar for both Whites and AA included total population discharge dispositions and hospital LOS. When we compared trends for AA to Whites from 2004-2010 to 2011-2015, in the later time period AA had longer hospital LOS (p=.028) but similar time to PC consultations (p=.13).

**Conclusion.** Some racial differences exist in inpatient non-hospice palliative care LOS and time to consultation; however, over time there was no difference in time to consultation.

#### **Implications for Research, Policy, or Practice.**

Further research on PC care trends in non-hospice palliative care is needed to fully articulate the true nature of PC racial disparities.

#### ***Opportunities for ACO Innovation in Hospice and Palliative Care (S775)***

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#### *Objectives*

- Describe how the Medicare ACO model addresses clinical coordination and financial responsibility for hospice and palliative care.
- Identify potential implications of the ACO model for the delivery of hospice and palliative care.

**Original Research Background.** The Medicare ACO model's built-in flexibility to support coordination of care, and the inclusion of hospice in the savings calculation for ACOs, incentivizes these organizations to reexamine how they use hospice and palliative care.

**Research Objectives.** Assess the potential implications of the Medicare ACO model for delivery of hospice and palliative care, due to the incentives around coordination of care and the financial inclusion of hospice expenditures in the ACO savings calculation.

**Methods.** We conducted a literature scan to quantify variation in hospice and palliative care delivery in the current Medicare fee-for-service (FFS) environment. We then applied microeconomic principles to identify how the transition to the ACO model could affect the variation and barriers identified. We also surveyed parallel efforts in the Center for Medicare & Medicaid Innovation to understand the implications of other new payment and delivery models.

**Results.** We identified three potential impacts of the ACO model structure on how ACOs utilize hospice and palliative care:

1. More attention by referring providers to hospice quality: Because ACO providers are both financially and clinically responsible for hospice utilization, providers have an incentive to refer to hospices providing high-quality care.
2. Expanded use of palliative care: The ACO model creates a market for palliative care as the start of a continuum of care for seriously ill beneficiaries that may act as a bridge to hospice care.
3. Condition-specific EOL care pathways: By encouraging patient-centered coordination and care planning, the ACO model incentivizes repackaging hospice care into a menu of services that can be tailored to different illness trajectories.

**Conclusion.** The substantial variation in hospice utilization and lack of a sustainable FFS palliative care model creates opportunities for more strategic use of these services by ACOs.

**Implications for Research, Policy, or Practice.**

This work highlights the opportunities for changing the delivery of hospice and palliative care under the ACO model.

**Hospital Resource Utilization and Presence of Advance Directives at the End of Life for Adults with Congenital Heart Disease (S776)** 

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*Objectives*

- Define hospital resource utilization by adults with congenital heart disease (ACHD) in the last 30 days of life.

- Recognize patterns of resource utilization for patients with ACHD in the context of those for cancer.

**Background.** Because of recent treatment advances, most children with congenital heart disease now survive to adulthood. Interventions, hospitalizations, and symptom management needs by this rapidly-expanding group are substantial. However, end-of-life utilization patterns are unknown.

**Research Objectives.** To examine end-of-life hospital use by patients with ACHD, and to compare this use to patients with advanced cancer.

**Methods.** A retrospective study combining electronic health record and Washington state death certificate data to identify 10,849 patients with ACHD or cancer who died between January 2010 and December 2015. Outcomes were resource use in the last 30 days of life including inpatient admissions, intensive care unit (ICU) stays, emergency department (ED) visits, and documentation of advance directives or POLST forms.

**Results.** There were 10,784 patients with cancer and 65 patients with ACHD who died during this time period. Median age at death was 63 and 45 years respectively. In the last 30 days of life, 39% of patients with ACHD were hospitalized, 39% had an ICU stay, 64% died in the hospital, and only 42% had a documented advance directive or POLST form. Compared to patients with cancer, patients with ACHD received significantly more ICU care (39% vs 10%, OR 2.62, 99% CI 1.35-5.09), adjusted for age, comorbidities, and care facility. There were also trends toward more hospital admissions and days of hospital and ICU care, and patients with ACHD tended to die more frequently in the hospital.

**Conclusion.** Patients with ACHD are more likely to receive care in the ICU in the last 30 days of life than those with cancer and may be less likely to die at home and have documentation of advance care planning.

**Implications for Research, Policy, or Practice.** Patients with ACHD represent an important population for improvements in palliative care. Multi-center involvement is needed to identify large numbers of ACHD patients for further study.

**Impact of Advance Care Planning Interventions on Patient and Family Satisfaction: A Systematic Review and Descriptive Analysis (S777)** 

Ryan Van Wert, MD, Stanford University, Stanford, CA. Ellen Wallace, BA, University of Massachusetts Medical School, Worcester, MA.

*Objectives*

- Discuss the types of interventions used to support high quality advance care planning.
- Recognize the impact of advance care planning on patient and family satisfaction.

**Background and Objective.** Patient satisfaction has been used to evaluate the quality of end-of-life (EOL) care, and is an increasingly used metric to measure provider performance and reimbursement. The objective of this systematic review and descriptive analysis was to determine the impact of advance care planning (ACP) interventions on patient and family satisfaction.

**Study Identification.** All prospective and retrospective clinical trials in adults and pediatric populations with an ACP intervention, and a measured outcome of patient and/or family satisfaction.

**Data Extraction and Synthesis.** Studies were grouped by type of ACP intervention, and the impact of the interventions on patient and family satisfaction was described for each type. Of 487 citations, 11 trials met inclusion criteria. ACP interventions were categorized as follows: self-directed completion of AD (1 study), self-directed ACP web-based or video education tools (2), and facilitated ACP discussion with trained facilitators (8).

**Results.** Study participants included general elderly (6) or pediatric populations (1) and specific populations including cancer (1), HIV/AIDS (1), teenagers with cancer (1) and dementia (1). Certain studies were based in specific care settings, including nursing homes (2), primary care clinics (1), palliative care units (3) and acute care (1). Self-directed ACP showed a trend toward increased patient satisfaction. The use of ACP video and web-based tools was associated with increased patient satisfaction. Six of the 8 studies of facilitated ACP conversations showed increased patient satisfaction. Several studies also demonstrated improvement in anxiety and depression symptoms, and increased completion rates of advance directive documents in ACP intervention groups. Families were generally more satisfied with EOL care when an AD was in place.

**Conclusions and Implications for Practice, Policy, and Research.** Patient and family satisfaction increased with a variety of ACP interventions, supporting the use of ACP in high quality EOL care. These data may also support a business plan for ACP programs, given the implications for provider reimbursement.

### *Nonpharmacological Interventions to Improve Sleep Among Adults with Advanced Serious Illness (S778)*

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#### *Objectives*

- Identify effective and non-effective interventions to improve sleep.

- Identify areas for future research to improve sleep.

**Background and Objective.** Sleep fragmentation is common among those in the advanced stage of a serious illness. Non-pharmacological interventions such as reduction in noise/light, to improve sleep have few, if any, adverse effects and are often underutilized in these settings. The objective is to systemically summarize the literature concerning non-pharmacological interventions to improve sleep among adults with advanced serious illness.

**Study Identification.** Inclusion criteria included experimental or quasi-experimental studies in any setting including palliative care or hospice.

**Data Extraction and Synthesis.** We searched several databases (Medline Complete, Cumulative Index to Nursing and Allied Health Literature, Wiley Interscience, Ageline, Academic Search Premier, and AMED) for studies focusing on sleep outcomes associated with non-pharmacological interventions involving participants with advanced serious illness published from 1996 to 2016.

**Results.** From a total of 2,731 results, 42 studies met the inclusion criteria. These included 31 individual interventions that were evaluated individually and some in combination with other interventions. Twelve studies employed either multiple interventions within an intervention category (n=8) or a multi-component intervention consisting of interventions from two or more categories (n=5). The team conducted a data extraction process that led to a list of codes for the type and method of intervention. These were grouped into categories that emerged from our synthesis: sleep hygiene (1), environmental (6), physical activity (4), complementary health practices (11), and mind-body practices (13). Of the 42 studies, 22 demonstrated a statistically significant, positive impact on sleep and represented each of the categories. The quality of the studies varied considerably, with 17 studies classified as strong, 17 as moderate, and 8 as weak.

**Conclusions and Implications for Practice, Policy, and Research.** Several interventions have been demonstrated to improve sleep in these patients. However, the small number of studies and wide variation of individual interventions within each category limit the generalizability of findings. Further studies are needed to assess interventions and determine effectiveness and acceptability.

### *Trends in Inpatient Palliative Care Referrals in Solid Organ Malignancies: Where Are We Now? (S779)*

Fabian Johnston, MD MHS, Johns Hopkins Medicine, Baltimore, MD. Jessica Ruck, BS, Johns Hopkins Medical Institutions, Baltimore, MD. Thomas Smith, MD

FAAHPM, Johns Hopkins Medical Institutions, Baltimore, MD.

*Objectives*

- Recognize the gap in inpatient palliative care use in patients with solid organ malignancies.
- Recognize the role evaluation of gaps in palliative care use may play in improving implementation of models for improving palliative care.

**Original Research Background.** It is unknown how frequently PC teams are involved in the care of patients with various malignancies.

**Research Objectives.** Evaluate the gap in palliative care referral for patients with solid malignancies

**Methods.** Using the National Inpatient Sample, we identified 357,267 inpatient hospitalizations 2012-2014 for patients with a primary diagnosis of cancer and a DRG risk of mortality of 3-4 (high risk). Patients were stratified by receipt of PC referral to compare cost of admission, number of diagnoses, frequency of cancer-specific surgical procedures, palliative interventions, and in-hospital death. Statistical significance was defined as  $p < 0.05$ .

**Results.** Of these high mortality risk patients, 51%-77% were treated at a teaching hospital and 11.4%-30.7% received a PC referral, depending on the type of malignancy. The frequency of palliative care referral from 2012-2014 increased for all malignancy types except brain cancer. Patients with a PC referral were less likely than patients without a PC referral to receive cancer-specific surgical procedures (all cancer types), pleural catheter placement (all except for pleural cancers) and prolonged intubation (>96 hours; all except melanoma and bone cancers). Overall, inpatient chemotherapy and radiation were infrequent (<10%) for all cancer types except testicular and pleural cancers. PC referral was associated with a lower cost of admission for all malignancies except testicular and pleural/mediastinal cancers, even among only patients who received no surgical procedures during the hospitalization. For all malignancies, PC referral was associated with a higher number of diagnoses and a higher risk of in-hospital death than no PC referral (30%-45% vs. 4%-10%, all  $p < 0.001$ ).

**Conclusion.** PC utilization appears to be increasing for patients determined to have a high risk of mortality. However, the difference in in-hospital death between those who receive a PC referral versus those without suggests that a PC referral is still triggered by imminent patient death.

**Implications for Research, Policy, or Practice.** To translate evidence into practice, understanding the gap is important.

**Music Intervention as a Nonpharmacological Tool in Improving Quality of Life of Palliative Care Patients (\$780)** 

Cynthia Peng, BS, Warren Alpert Medical School of Brown University, Providence, RI. Kelly Baxter, APRN, Care New England, Warwick, RI. Kate Lally, MD, Care New England Health System, Providence, RI.

*Objectives*

- Identify appropriate patients to receive music intervention.
- Discuss how to select appropriate pieces to perform for patients and their families.

**Original Research Background.** The pain, anxiety, and stress associated with end-of-life care are paramount issues to address for both patients and their families. Reduction of these factors could translate to improved quality of life for patients approaching the end of life.

**Research Objectives.** We studied the effect of adding music to standard care for patients receiving palliative care in two hospitals in the Care New England healthcare system.

**Methods.** In this mixed quantitative and qualitative study, we implemented live music intervention sessions. Outcomes collected include symptom burden pre- and post-intervention using the Edmonton Symptom Assessment Scale, opioid use in 24-hour periods before and after the music intervention, as well as qualitative personal narratives of patients' and families' experiences with the music.

**Results.** We collected data from 45 patients. Notably, on the ESAS there were significant decreases in pain, anxiety, and feelings of depression, along with significant increase in feelings of well-being. Opioid use in 24-hour periods after the music intervention showed a trend toward decreased usage, when compared the 24-hour period before. Finally, we compiled qualitative personal narratives of patients' and families' experiences of the music intervention. We found common themes of comfort, relaxation, escape, and reflection.

**Conclusion.** This pilot project demonstrated the beneficial effects of music in a specific patient population that often struggles with symptom management when only pharmacologic management is used. These data more quantifiably elucidates tangible biological and psychosocial factors that are positively impacted by the intervention.

**Implications for Research, Policy, or Practice.** With additional evidence in music as well as other artistic modalities, it is promising that arts-based programs in inpatient hospice and palliative care settings will continue to expand and flourish.

## Quality Improvement Posters

### “Doctor, Will You Pray with Me?” A Quality Improvement Project to Overcome Discomfort in Discussing Patient Spirituality (QI801)



Tara Cook, MD, University of Pittsburgh Medical Center, Pittsburgh, PA. April Christensen, MD, University of Pittsburgh Medical Center, Pittsburgh, PA.

#### Objectives

- Recognize the importance of religious care in whole-person palliative care and its underutilization in clinical practice.
- Describe at least three common barriers that palliative clinicians encounter when addressing patients' religious needs.
- Discuss a model for increasing quality and quantity of religious care implemented at one institution and identify potential ways this model can be adapted to other institutions or care settings.

**Background.** Inadequate exploration of religious needs may lead to unaddressed suffering. Nearly 90% of patients prefer that their clinicians understand their religious beliefs and how these impact medical decisions. While guidelines for discussing patients' religious concerns are available, clinical implementation is lagging. We were interested in improving palliative care clinicians' assessment of religion.

**Aim Statement.** The aim of this quality improvement (QI) project was to determine clinician barriers to addressing hospitalized patients' religious needs and measure the quality and quantity of clinician conversations following an educational intervention targeting identified barriers.

**Methods.** This IRB-approved QI project targeted palliative care clinicians at the University of Pittsburgh Medical Center between September 2016 and May 2017. Baseline religious assessment data was obtained by reviewing 105 charts and surveying 21 clinicians. Review of free-text comments elucidated common barriers to religious history taking. With chaplains, these results were used to develop a one-hour educational intervention. We incorporated established palliative care communication strategies for addressing two identified challenges — when a clinician is questioned regarding their religious beliefs and when a patient is questioning personal faith. Additionally, instruction on a validated religious history tool was provided. A post-intervention chart review and survey were conducted.

**Results.** The post-intervention survey demonstrated a 43% to 75% increase in self-reported confidence, including an over 10% increase in five of six aspects of religious care. Perceived barriers changed from procedure-focused, including uncertainty on how to respond to religious distress, to time-focused, concerned about insufficient time to explore distress. The post-intervention review of 103 charts showed a significant increase in religious history documentation. The number of charts documenting two or more religious history questions increased from 13% pre-intervention to 36% post-intervention. Post-intervention charts also documented a broader range of questions.

**Conclusions and Implications.** This project demonstrates that a one-hour intervention focusing on barriers and how to use a common religious history improved both quality and quantity of conversations.

### First Responders: Educating Interdisciplinary Champions to Provide Primary Palliative Care (QI802)



Kathleen Broglio, DNP NP ACHPN ANP CHPN FPCN, Dartmouth Hitchcock Medical Center, Lebanon, NH. Shila Pandey, NP, Columbia University Medical Center, New York, NY. Frances Eichholz Heller, MSW, NY Presbyterian, New York, NY. Craig Blinderman, MD MA FAAHPM, Columbia University Medical Center, New York, NY.

#### Objectives

- Describe a palliative care interprofessional education program for nurses, nurse practitioners, social workers and physician assistants.
- Discuss participants' reports of changes in practice and implementation of educational and quality improvement projects.

**Background.** We implemented an interprofessional palliative care education project to train clinicians in primary palliative care skills in an urban academic medical center through a Fan Fox and Leslie R. Samuel's Foundation Grant.

**Aim Statement.** Promote integration of palliative care principles in this institution as standard of care for patients/families facing serious illness; and enable participants to implement palliative care education or quality improvement (QI) projects.

**Methods.** Registered nurses, nurse practitioners, social workers and physician assistants participated in a one-year program. In year one, participants were selected by managers and in years two and three, participants applied for admission to the program. Palliative Care faculty members delivered monthly didactics,

videotaped for enduring education, on principles of palliative care including communication skills, symptom management, and care of the imminently dying. Additional components of the program were rounding with the palliative care team, and attending interdisciplinary palliative care rounds. Participants, in interprofessional groups, created an educational activity or QI project for their selected clinical area.

**Results.** 24/38 (63%) completed year one, 29/39 (74%) completed year two, and 31/35 (89%) are midway through completion of year three. End of program surveys were completed by 10/24 (42%) year one and all reported changes in practice. In year one follow-up survey 15 months later 15/38 (39%) completed the survey and 13/15 (87%) reported changes in practice. In year 2, 17/29 (59%) completed the survey and 13/17 (76%) reported practice changes. Examples of participant projects include: advance care planning; integrating spiritual assessment; staff education about end of life religious/spiritual; yoga/meditation for oncology patients; dyspnea management in the ICU.

**Conclusions and Implications.** Interprofessional palliative care education promotes integration of palliative care principles into primary practice. Further development includes physician participation in the interprofessional education and development of robust measurement of this education on interprofessional collaboration and patient outcomes.

### ***A Quality Improvement Approach to System-Wide Physician Referral Patterns for Hospice Care (QI803)***

Gregory Luke Seidensticker, MD, OhioHealth, Columbus, OH. Nicole Haller, MHA, OhioHealth, Columbus, OH. Charles von Gunten, MD PhD FACP FAAHPM, OhioHealth, Columbus, OH.

#### *Objectives*

- Recognize that referral for hospice care is a behavior amenable to behavioral feedback.
- Physicians change their behavior when given their personal performance for hospice referral.

**Background.** Hospital-based hospice programs generally have short lengths of service in home hospice care—much shorter than free-standing hospice programs

**Aim Statement.** Improve Hospice Length of Service by giving physicians feedback on their performance.

**Methods.** The OhioHealth Clinical Guidance Council, comprised of physician subcommittees by specialty, sets standards of care for purposes of improving quality and decreasing cost by facilitating decrease in variation for 3500 physicians serving the system across 40 counties in central Ohio. The median length of stay of patients referred by all OhioHealth physicians was obtained for 2015. For the oncology, cardiovascular,

neurosciences, primary care and hospitalist clinical guidance councils, a letter from the Chair was sent to each physician noting gap between the council's opinion about optimal length of stay, the length of stay reported by the National Hospice and Palliative Care Organization (NHPCO), and the median length of stay of all patients referred by OhioHealth physician members of that clinical guidance council. A chart graphing the median length of stay by member, indicating the name of the member to which the letter was directed, was mailed to each physician. One year later, for calendar year 2016, the measurement of median length of stay by physician was repeated.

**Results.** For all physicians in 2015, the median length of stay in targeted specialties was 15 days, in those not targeted (control), 16 days. In 2016, the median length of stay for all physicians in targeted specialties was 25 days. In those not targeted (control) it was 10 days. The national median length of stay in hospice care is 17 days. The median length of stay for all OhioHealth Hospice patients was 10 days at the time this project was conducted.

**Conclusions and Implications.** A simple QI approach yielded a 250% improvement in hospice median length of stay between intervention and control to a level above the national median.

### ***Implementing the Bereaved Family Survey for an Advanced Cancer Population (QI805)***

Jessica Kaltman, MD MSHS, University of California Los Angeles, Los Angeles, CA. Anne Walling, MD PhD, University of California Los Angeles, Los Angeles, CA. Neil Wenger, MD MPH, University of California Los Angeles, Los Angeles, CA.

#### *Objectives*

- Understand the implementation of a post-mortem survey in a large health system.
- Understand vital areas for quality improvement in EOL care.

**Background.** Despite being endorsed as a National Quality Forum measure, the Bereaved Family Survey (BFS), a tool to assess a patient's end-of-life (EOL) experience, has not been broadly used outside the Veteran's Affairs Health System or in the outpatient setting. We adapted the BFS for an advanced cancer population and implemented it at an academic health system.

**Aim Statement.** Identify areas for quality improvement in EOL care.

**Methods.** Between August 2016 and May 2017, we surveyed caregivers of advanced cancer decedents. We included English-speaking decedents  $\geq 18$  years of age who were continuity patients of a health system oncologist and had documentation of metastatic disease in either problem list, oncology notes, or advanced imaging. Death was verified in the chart or by obituary found via internet search. Caregivers surveyed were the

appointed healthcare agent in an advance directive or the first listed contact. Scoring was done via the top-box approach. Surveys were mailed 3 months after death with a follow-up post-card reminder and phone-call at 2 and 4 weeks, respectively.

**Results.** Of 285 eligible decedents, 242 caregivers were mailed surveys with 83 completed (34% response rate) of whom 28% died in the hospital. Mean overall BFS score was 75 out of 100. Ratings were high for overall care quality (78% Always/Usually) and staff caring (74% Always) with lower ratings for communication (58% Always), emotional/spiritual support (37% Always with 30% not wanting support) and pain control (56% Always/Usually uncomfortable). Nearly 84% of respondents felt their loved one died in the right place and 67% felt staff caring for the patient provided a dignified death. 74% of patients were referred to hospice with 64% of caregivers stating the hospice referral was timely.

**Conclusions and Implications.** A post-mortem survey implemented for an advanced cancer population received a modest response rate but collected valuable information regarding gaps in care quality to drive quality improvement.

### *Determining the Feasibility and Utility of Risk Assessment in Opioid-Treated Patients with Cancer at an Outpatient Palliative Care Clinic (QI806)*

Lindsay Jablonski, PharmD Candidate, University of Pittsburgh School of Pharmacy, Pittsburgh, PA. Julie Childers, MD MS FAAHPM, University of Pittsburgh, Pittsburgh, PA. Susan Jessell, MSN ACHPN CRNP, University of Pittsburgh Medical Center, Pittsburgh, PA. Jennifer Pruskowski, PharmD, University of Pittsburgh School of Pharmacy, Pittsburgh, PA.

#### *Objectives*

- Discuss the feasibility of opioid risk screening in an outpatient palliative care oncology clinic.
- Quantify the capacity of opioid risk screening tools to provide results that influence prescribing decisions in an outpatient clinic setting.

**Background.** Opioid risk screening tools may facilitate safer opioid prescribing by identifying patients at the highest risk for opioid abuse, misuse and diversion. However, it is unclear if these tools actually influence prescribing decisions.

**Aim Statement.** To increase the prevalence of opioid risk screening for palliative care outpatients receiving chronic opioid therapy and to assess if screening results influence clinicians' prescribing decisions.

**Methods.** A student pharmacist attended clinic one afternoon per week to screen all patients prescribed chronic opioid therapy using the Opioid Risk Tool

(ORT) and the Screener for Opioid Assessment for Patients with Pain-Short Form (SOAPP-SF). Then, a palliative care clinician conducted a routine office visit. Finally, the student pharmacist shared screening results with the clinician, who reported if results impacted prescribing decisions.

**Results.** 30 patients were screened in total; 70% were male, 86.7% were white, and the mean age was 54.6 years old. 23.3% of patients had colorectal cancer; a variety of other cancers were represented. 30% of patients scored positive on the SOAPP-SF, and 20% of patients scored high risk on the ORT. Prescribing decisions were changed for 33.3% of patients; the most common prescribing decision among high risk patients was to keep the opioid dose the same.

**Conclusions and Implications.** The results from this quality improvement project demonstrate that formal risk screening may impact prescribing patterns in an outpatient palliative care oncology clinic, suggesting that formal screening protocols may be beneficial for clinicians when prescribing chronic opioids. In addition, this strategy may reduce the amount of opioids prescribed to patients at highest risk for opioid abuse, misuse, and diversion, thereby protecting patients and communities. Further research is needed to determine the most effective and least burdensome strategy for incorporating formal risk screening into standard practice.

### *Improving Healthcare Proxy Completion Rate (QI807)*

Vandana Nagpal, MD FACP, UMass Memorial Health Care, Worcester, MA. Jennifer Reidy, MD FAAHPM, UMass Memorial Health Care, Worcester, MA.

#### *Objectives*

- Involving interdisciplinary team in a QI project.
- Sustaining a QI project.

**Background.** Every adult should have a healthcare proxy (HCP), and this is especially true for patients seen by palliative care. Ideally, they would have conversations with their primary clinicians about serious illness, with appropriate advance care planning. However, many inpatients do not have an HCP. We decided to review the records of inpatients seen by the palliative care service at our institution and found that only 60% had a valid HCP form on discharge.

**Aim Statement.** The aim of this project was to improve HCP completion rate among inpatients seen by palliative care to more than 90% by time of discharge.

**Methods.** We collected our baseline data from July to October 2016. We discussed opportunities for improvement among our interdisciplinary team and performed a root cause analysis of our current performance. We got buy-in from team members and

standardized the inclusion of patients' HCP status in daily rounds. The HCP forms were made readily available in our office area and any team member, including our social worker, pharmacist, and learners, could be tasked to obtain a valid HCP document for our patients. We continued to monitor our performance monthly and reported back to individual team members.

**Results.** We collected monthly data from November 2016 to April 2017. The electronic patient charts were randomly checked for the presence of an HCP document to confirm our database. We achieved a 93% or more HCP completion rate by the time of discharge for each of these months. The remaining 7% of patients lacked capacity to make decisions and could not complete a HCP.

**Conclusions and Implications.** Standardization of the process and involvement of all team members appears to be the key in improving HCP documentation. It removes variability and inconsistency between providers and is essential for the success. However, the patient-related factors add some unpredictability. Our next steps involve dissemination within our larger institution.

### *Pilot Implementation of a Low-Literacy Zone Tool for Heart Failure Self-Management (QI808)*

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#### *Objectives*

- Name and define the 3 components of HF self-care, according to Riegel et al's revised theory.
- Describe the meaning and practical significance of the 3 different colored zones in the Zone Tool for Heart Failure Self-Management used in this QI project.
- Identify methods by which this QI project's lead evaluated feasibility of the HF zone tool.

**Background.** Heart failure (HF) affects 6.5 million Americans, with 1 million hospitalizations annually, a 21.9% readmission rate, and \$31 billion in healthcare costs. Palliative care (PC) decreases HF patients' symptom burden, readmissions, and costs. Many elderly patients have difficulty recognizing and reporting HF symptoms to their providers in a timely manner. Self-care tools with color-coded zones (green = all clear; yellow = caution; red = take action) help patients recognize and respond to HF symptoms and reduce readmissions and costs.

**Aim Statement.** The purposes of this quality improvement (QI) pilot project were to evaluate the feasibility of implementing a low-literacy zone tool for HF self-management with home-based PC patients and to test the zone tool's effect on self-care and quality of life.

**Methods.** An interdisciplinary PC team developed a zone tool for HF self-management. Fifteen patients with advanced HF in a home-based PC program were recruited for this QI project. Health literacy was prescreened with the Newest Vital Sign instrument. HF self-care and quality of life were measured respectively with the Self-Care of Heart Failure Index and the Kansas City Cardiomyopathy Questionnaire at baseline, 30 days, and 60 days. In post-implementation surveys, participants and nurses rated the zone tool's readability and helpfulness (feasibility). Analyses of variance (ANOVA's) evaluated the zone tool's effect on self-care and quality of life.

**Results.** Participants evaluated the zone tool as easy to understand and helpful in recognizing and reporting HF symptoms. Due to the small sample size, ANOVA's were inconclusive regarding the effect of the HF zone tool on the two primary outcomes of interest.

**Conclusions and Implications.** This QI project demonstrated the feasibility of implementing a zone tool for HF self-management for patients in a home-based PC program. Further research with larger samples is needed to assess HF zone tools' effect on self-care and quality of life.

### *Utilization of Support Services, Emergency Department and Hospitalization in Advanced Cancer Patients with Severe Disease in a Community Cancer Institute (QI809)*

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#### *Objectives*

- Define advanced cancer population and severity of disease.
- Describe a model of support service delivery in a community cancer institute.
- State the correlation of as-needed support service referral on ED utilization and unplanned hospitalizations in one community cancer center.

**Background.** Patients with advanced cancer are at high risk for emergency department (ED) and

hospital utilization, which is distressing and costly. Palliative care consultation and symptom management clinics have been shown to decrease ED and hospital utilization, but the frequency and composition of these interventions is still being delineated.

**Aim Statement.** To describe healthcare utilization in patients with advanced cancer with respect to support services provided and severity of disease in a community setting.

**Methods.** 157 patients with advanced cancer of pulmonary, gastrointestinal, genitourinary or gynecologic origin diagnosed January-December 2015 were reviewed retrospectively. Descriptive data including demographics, disease characteristics, palliative care consultation, support services utilized, and ED visits/hospitalizations were collected for 12 months, or to date of death. Support services included physician assistant–led symptom management, nurse navigator, social worker, nutrition, financial counselor, chaplain, and oncology clinical counselor. Support service referrals were made based on identified needs. Severe disease was defined as death within 6 months of diagnosis.

**Results.** Patients with severe disease had a mean of 6 ED visits per year, significantly greater than patients with non-severe disease ( $p < 0.001$ ). Patients with severe disease also had more contacts with support services per year (30.3 vs 9.1,  $p < 0.001$ ). A palliative care consult was placed in 50% of patients with severe disease, and 23% in patients with non-severe disease ( $p < 0.001$ ).

**Conclusions and Implications.** Patients with advanced cancer have high healthcare utilization in the last 6 months of life. As-needed involvement of support services correlated with severity of disease but did not result in decreased ED utilization or hospitalization. These data suggest that availability of as-needed support services alone is not a reliable strategy to impact unplanned hospitalizations and ED visits. Further research is needed to determine if preemptive or mandatory utilization of support services is sufficient to reduce healthcare utilization.

### *Designing and Implementing a Nursing Education Simulation to Improve Confidence and Competence in Providing Palliative Care for the Dying Patient (QI810)*



Benjamin Roberts, MSN RN, Johns Hopkins University School of Nursing, Baltimore, MD. Kaytlyn Burke, MSN, Johns Hopkins University School of Nursing, Baltimore, MD. Lauren Greco, MSN RN, Johns Hopkins School of Nursing, Baltimore, MD. Valerie Cotter, DrNP, Johns Hopkins School of Nursing, Baltimore, MD. Jennifer Wenzel, PhD, Johns Hopkins School of

Nursing, Baltimore, MD. Nancy Sullivan, DNP RN, Johns Hopkins School of Nursing, Baltimore, MD.

#### *Objectives*

- Identify simulation components designed to improve pre-professional nursing palliative care curricula through simulation, in accordance with recent AACN recommendations.
- Compare perceived student confidence and competence in providing patient-centered end-of-life care based on pre- and post-simulation evaluations.

**Background.** The AACN has recommended improved palliative care competencies and curricular guidelines, as there is limited clinical preparation for nursing students. In response to this gap in nursing curricula, three graduating nursing students utilized a literature-based approach to address nursing student anxiety and low perceived competence to provide end-of-life care.

**Aim Statement.** The purpose of this Quality Improvement Project was to develop a high fidelity simulation for pre-professional nursing students to improve confidence and competence in providing care for the dying person in the hospital setting.

**Methods.** With support from Johns Hopkins School of Nursing faculty specializing in simulation and palliative care, student leaders developed an initiative to involve other pre-professional students in an introductory scenario in which a patient died while hospitalized for a heart failure exacerbation. Pre-professional nursing students with a variety of backgrounds and an interest in palliative care participated in the simulation. Participants were asked to complete pre- and post-test surveys to demonstrate perceived confidence and competence in physiological and psychosocial support for the dying patient.

**Results.** In the simulation pre-brief, student leaders facilitated identification of the intent of the simulation, the physiological and psychosocial needs of the patient, symptom management strategies, communication techniques, challenges they anticipated, and personal concerns. During the simulation, students experienced decompensation and simulated death of a standardized patient actor and were tasked with providing comfort measures for the patient and two standardized family members. During the debrief faculty utilized concept maps to guide discussion regarding plan of care, comfort measures, ethical issues, communication techniques, and personal reactions to the simulation.

**Conclusions and Implications.** Student evaluations will be utilized to guide future simulation delivery in palliative care to the entire student body as well as to develop other palliative care simulations.

### **Quality Improvement and The Veterans Health Administration's Palliative Care National Clinical Template (QI812)**



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#### *Objectives*

- Identify opportunities to use existing process level EHR data in their practice settings for quality assessment.
- Identify approaches to optimize quality efforts using process level data.

**Background.** Process measures provide evidence of care delivered at the bedside. The Veterans Health Administration's (VHA) Palliative Care National Clinical Template (PC-NCT), writes process-level data from palliative care (PC) consultations to the Electronic Health Record (EHR) that are aggregated and used for quality improvement (QI).

**Aim Statement.** To describe experience using the PC-NCT across facilities for QI.

**Methods.** Process-level data generated during PC-NCT consults (7/1/2014 – 6/30/2017) were extracted from the EHR. We obtained user feedback and descriptively analyzed patterns of use for QI.

**Results.** The PC-NCT was used 32,566 times (34% of palliative care consultations) at 82 facilities (67% of facilities) to document care. At the domain level, Clinical Presentation was used in 97%, Social History 84%, Symptom Review 78%, Psychological Assessment 17%, Palliative Performance Scale (PPS) 77%, Care Planning 79%, Spiritual Concerns 57%, Physical Examination 87%, and Assessment and Recommendations 94% of PC-NCT consults. Facility culture, preferential use of locally developed tools, and challenges with note formatting are reported as reasons for non-use.

PC-NCT data identify clinical questions for teams that are reviewed during twice yearly QI calls. Sites with low PPS scores are prompted with, "How are you collaborating with other services to promote earlier PC consultation?" Those with large numbers of patients reporting dyspnea are asked to consider how opioids are used in dyspnea management, and sites with sparse documentation of spiritual concerns are asked to consider what questions clinicians ask about spiritual concerns and whether they are comfortable addressing those needs. In addition to template use for quality assessment, it is used to educate new PC trainees on salient content for comprehensive consults and reduce inter-provider variability in PC delivery.

**Conclusions and Implications.** Competition for scarce resources in healthcare necessitates optimizing use of existing data. Process-level data from a standardized PC note template can be used for QI, training, and standardization among staff.

### **Palliative Care in Hematologic Oncology: A Needs Assessment (QI813)**



Gene Decastro, MD, Northwell Health, Manhasset, NY. Bridget Earle, MD, Northwell Health, Manhasset, NY.

#### *Objectives*

- Name the symptoms and issues most frequently seen by hematology providers.
- List and discuss strategies used in the screening of complex needs in hematology patients.

**Background.** As patients with hematologic malignancies further enter the scope of practice for palliative medicine physicians, it is important to have an accurate view of their needs. Historically, there is a paucity of research examining symptom burden in this cohort. Even fewer studies explore the experience and perceptions of frontline hematology providers. As our Geriatric and Palliative Medicine team at North Shore University Hospital (NSUH) embarked upon a collaborative Supportive Care model on our hospital's dedicated Leukemia and Bone Marrow units, it was necessary to gain insight from providers about this population.

**Aim Statement.** Identify issues seen by hematology providers with a prevalence greater than 65 percent.

**Methods.** We conducted a supportive care needs assessment survey of the staff (faculty, fellows, nurse practitioners, nurses, social workers, and case management) from the Leukemia and Bone Marrow units. The survey encompassed eighteen domains and attempted to assess their prevalence in patients according to the Hematology team. It included symptoms, social and functional complexities, advance care planning, and goals of care. Free text responses were used to capture staff input about challenges in caring for this population.

**Results.** We received a response rate of 30% (30/101) with respondents primarily being nurses. It revealed the most commonly seen domains. Those selected as "frequently" or "almost always" were fatigue (97%), nutritional issues (96%), gastrointestinal issues (93%), anxiety (80%), goals of care (69%), and advance directives (69%). We learned that symptom management was a challenge for the staff. Managing patients' expectations about chemotherapy was a key concern. Lastly, clear communication with patients throughout treatment and caregiver support were consistent themes.

**Conclusions and Implications.** Determining that the four most prominent symptoms encountered by

hematology staff were fatigue, nutritional, gastrointestinal, and anxiety can help refine patient assessment. Moreover, communication and decision making concerns were important to staff. These results underscore the necessity of provider perspectives while treating patients with hematologic malignancies to guide future initiatives.

### ***A Three-Step Process to Create a Palliative Medicine Co-Management Model of Care on an Inpatient Hematology Unit (QI814)***

Gene Decastro, MD, Northwell Health, Manhasset, NY.  
Bridget Earle, MD, Northwell Health, Manhasset, NY.

#### *Objectives*

- Name and discuss strategies to build partnerships between a palliative medicine team and other services.
- Identify key metrics and outcomes that support and enhance co-management partnerships.

**Background.** Northwell Health's North Shore University Hospital (NSUH) campus has a dedicated hematology unit. This cohort of patients is under-represented on our inpatient palliative care service, comprising < 1% of initial consultations in 2016. Given recent recommendations by the American Society of Clinical Oncology about comprehensive cancer care and recognizing the growing need for palliative care in patients with hematological malignancies, our goal was to initiate a concurrent hematologic and palliative care delivery model.

**Aim Statement.** Increase the number of Palliative Medicine consultations on the Hematology unit by 100 percent within three months.

**Methods.** A three-step process was initiated: inpatient service buy-in and joint workgroup development, concurrent care delivery, and linkage to outpatient partners. The first step was to obtain buy-in with faculty stakeholders at our institution, including Hematology-Oncology leadership. There was immediate support for a partnership. Next, a workgroup was assembled to jointly generate a needs assessment survey to determine how best to assist in the care of these complex patients. We identified key metrics to measure and linked our inpatient service with outpatient care via our Supportive Oncology practice.

**Results.** The five month process culminated in biweekly "screening rounds" with the Hematology team, which were initiated in late June 2017 and have identified high-need patients for consultation. In 2016, our service saw two hematology unit consults per month. In the month of July 2017, we saw thirteen consults (650 percent increase).

**Conclusions and Implications.** Through relationship management, workgroup development, and care transition to the community, an inpatient

supportive care co-management model for patients with hematologic malignancies was successfully implemented using a three-step process. This strategy can be replicated for other services with complex patients. Future analysis of these metrics will be able to provide valuable feedback to both services. By creating health-care pathways with an emphasis on Palliative Medicine co-management, we are poised to deliver comprehensive care and measure its impact.

### ***Sutter Health Advanced Illness Management (AIM) 2016 Program Update (QI815)***

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#### *Objectives*

- Identify three measures of success for innovative palliative care programs serving the seriously ill patient population.
- Identify three characteristics of the advanced illness population.

**Background.** Sutter Health's AIM program began in 2009. We received a CMMI First Round HCIA three year grant in 2012. The ability to demonstrate value is critical to sustainability of innovative care models. The poster provides AIM program outcomes for 2016, as well as strategies for financing the program post-grant.

**Aim Statement.** The AIM program demonstrates the impact an innovative program to improve the experience and quality of care while lowering the cost.

**Methods.** AIM program development included creating metrics for operational, clinical, and financial outcomes, and patient satisfaction. The team monitors process measures on a daily, weekly, monthly and quarterly basis to ensure program quality and effectiveness. Metrics demonstrate program value and identify opportunities for performance improvement. The program was evaluated by an independent review through the CMMI grant and determined to be of significant value.

**Results.** The 2016 AIM program highlights include an average daily census of approximately 2,700 patients receiving 119,000 contacts via phone or visit. The program serves patients over 19 counties in Northern California and received referrals from 1,900 physicians. 81.7 percent of patients served were Medicare age, and 32 percent had a primary diagnosis of cancer. 43 percent of AIM patients transitioned to hospice care. The AIM patient population experienced an 8 percent reduction in emergency room visits; a 60 percent reduction in hospitalizations;

a 64 percent reduction in ICU utilization; and a 6 percent reduction in the average length of a hospital stay. Overall patient satisfaction was 86 percent. Advance Care Planning documentation was completed within 90 days for 97 percent of AIM patients.

**Conclusions and Implications.** AIM is an effective model to support seriously ill patients. The reductions in high cost health care utilization translates into significant total cost of care savings. Sutter Health's ability to implement and sustain AIM in a variety of markets demonstrates the ability to replicate the program within other health care organizations.

### *Impact of a Home-Based Palliative Care Program for Advanced Heart Failure (QI816)*

Christopher Rowe, Transitions Lifecare, Raleigh, NC. Catherine Quintana, RN, Transitions LifeCare, Raleigh, NC. Stephen Young, MD, Transitions LifeCare, Chapel Hill, NC. Laura Patel, MD, Transitions LifeCare, Raleigh, NC.

#### *Objectives*

- Describe an interdisciplinary home-based palliative care pilot program for patients with advanced heart failure.
- Discuss preliminary outcomes of home-based palliative care intervention on acute care utilization and satisfaction.

**Background.** Transitions LifeCare partnered with a community hospital to offer home-based palliative care (HBPC) to patients with advanced heart failure (HF). These patients were identified by the hospital as high utilizers of services. HBPC provided symptom management, psychosocial support, advance care planning, and patient education.

**Aim Statement.** Evaluate the impact of HBPC support on hospital utilization and quality of care.

**Methods.** This is a case series of 20 patients with advanced HF who were high utilizers of healthcare resources. Initial HBPC consultation occurred within 7 days of hospital discharge and care continued for 4-6 weeks. A nurse-directed interdisciplinary team provided physical assessment, symptom management, medication reconciliation, advance care planning, and psychosocial support. The Quality Data Collection Tool for Palliative Care was used to collect symptom management data and the FAM-CARE-2 was used to assess family satisfaction. Data were collected for hospital utilization in the 90 days leading up to the intervention and compared to utilization during the pilot.

**Results.** Hospital admissions declined by 52.4%, from 14.7 per 30 days to 7 per 30 days ( $p = 0.001$ ). Hospital days decreased by 53.8%, from 86.7 per 30 days to 40 per 30 days ( $p = 0.04$ ). Total ICU usage decreased

100%, from 9.7 per 30 days to 0 per 30 days ( $p = 0.01$ ). Overall symptom burden decreased, and 40% of patients had a change in code status or advance directives.

**Conclusions and Implications.** This HBPC program significantly reduced hospital admissions, total hospital days and ICU utilization for the participants while reducing symptom burden. Expanding this HBPC program would provide high quality care to patients and cost savings to the partnering hospital. Based on average hospital costs of HF admissions in NC, this could represent a savings of up to \$8,000 per patient for this 30-day period.

### *Implementation of Advance Care Planning EMR Tool into an Outpatient Primary Care Clinic, a Multidisciplinary Approach (QI817)*

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#### *Objectives*

- Demonstrate effectiveness of educational sessions and social worker involvement regarding implementation of new EMR tool into a primary care clinic for ACP documentation.
- Discuss implications of our project and future goals.

**Background.** The Care Alignment Tool (CAT) is an Electronic Medical Record (EMR) tool designed to enhance advance care planning (ACP) conversations and documentation in Canopy. The CAT guides providers through advance care planning by prompting questions regarding patient beliefs about their health, goals for future health states, and, if applicable, desires for end of life care. Providers can then document their conversations and the form is available as part of the patient's EMR. Under a centrally located tab, it can be easily accessed during any encounter and is easily modified if the patient's health circumstances, or wishes, change.

ACP documentation remains a major challenge, with particular respect to communicating ACP goals across the spectrum of health care settings. One study demonstrated approximately 50.9% of patients aged 65 or older had documentation of preferences for ACP in the EMR; among these patients only 1/3 had a scanned document available. This allows disparity between patients' desired preferences and their actual experiences at the end-of-life.

**Aim Statement.** Our goal was to increase utilization of the CAT for patients ages 65 and older at our home practice, Elizabeth Family Medicine, from January, 2016 until March of 2017.

**Methods.** We employed the model for improvement methodology. Our interventions were two brief educational sessions for clinicians, as well as embedment of a clinical social worker at the practice specifically for ACP discussions and aide. A monthly report of CATs performed was used to collect out data.

**Results.** Pre-intervention: 10 total CAT completed during 12 months CAT was available to providers.

**Post-intervention:** Over 3 months, a total of 22 CAT were completed.

**Conclusions and Implications.** We observed a meaningful increase in CAT utilization after implementation of our collective outpatient-directed intervention. These results not only indicate a successful implementation of CAT into an outpatient primary care setting, but shows that simple interventions utilizing multiple disciplines can have a profound impact.

### *Empowering Key Players: A Pilot Intervention to Improve Nurses' Perceived Confidence and Ability to Utilize Palliative Care Communication Strategies (QI818)*

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#### *Objectives*

- Verbalize two palliative care communication techniques that are effective for improving nurses' perceived confidence and ability in communication skills.
- Identify strategies associated with successful implementation of a 1-hour educational course on palliative care communication techniques.

**Background.** Effective communication is an important aspect of healthcare for patients requiring inpatient oncology and palliative care (PC) services. Inadequate communication decreases patient satisfaction and increases adverse patient outcomes. Registered nurses (RNs) are uniquely positioned to improve communication with patients and patient families. However, research shows that most RNs have not received PC communication training and feel insufficiently prepared to communicate with patients and patient families.

**Aim Statement.** The purpose of this pilot intervention was to provide RNs with PC communication education in an effort to increase RNs' perceived confidence and ability to communicate with families and care providers about complex PC topics.

**Methods.** The project took place on two oncology step-down floors in a large academic medical center. The project consisted of six 1-hour educational sessions offered to RNs. The educational sessions consisted of didactic instruction on PC communication techniques and role-play simulations. For 6 weeks following the sessions, project investigators performed unit rounding to reinforce PC communication skills. To evaluate outcomes, a previously validated Likert-scale survey was utilized in a pre-intervention/post-intervention design. A numerical point value was assigned to each potential response on the survey Likert scale.

**Results.** Twelve RNs ( $n = 12$ ) completed the pilot intervention. Overall pre-intervention to post-intervention aggregate mean survey scores increased by 10.3 points ( $p < 0.01$ ). Self-perceived ability increased by an aggregate mean of 8.9 points ( $p < 0.01$ ), and self-perceived confidence increased by an aggregate mean of 1.42 points ( $p = 0.10$ ).

**Conclusions and Implications.** This pilot project supports that an economical 1-hour educational session on PC communication techniques followed by educational reinforcement through unit rounding can successfully improve RNs' perceived ability to utilize PC communication skills. Implications for future research includes replicating this project on a larger scale and investigating correlations between increased levels of RN perceived confidence and ability in PC communication skills with patient satisfaction and outcomes.

### *WGYLM?™ Strategies to Encourage Advance Care Planning of Healthcare Providers (QI819)*

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#### *Objectives*

- Identify strategies to encourage advanced care planning conversations among health care providers as well as patients.
- Describe tools to help initiate advance care planning conversations and discuss the benefits of having quality advance care planning conversations.

**Background.** Conversations regarding healthcare decisions are central to patient- and family-centered care. Early and regular advanced care planning

(ACP) conversations benefit the patient, family, multi-disciplinary team, and healthcare system.

**Aim Statement.** Initiatives targeting employee's participation in their own ACP may extend to improvement in patients' ACP utilization.

**Methods.** A social experiment entitled, "What gives your life meaning" (WGYLM?™) initially developed at California State University—San Marcos to increase student's awareness of ACP was adapted to focus health system's employees' attention on ACP over the course of a 3-month campaign, which culminated during National Healthcare Decisions week.

**Results.** Campaign information was displayed on 10,000 workstations, in a newsletter with 12,500 subscribers, and in a front page article in the local newspaper. Almost 1,700 Post-Its with comments regarding what gives their life meaning were collected. Over 1,500 ACP packets with ACP resources were distributed. 1,200 signatures pledging to discuss ACP with a loved one within 30-days. Of the 664-successful follow-up email sent to pledge participants:

- 77 (12%) respondents responded to the survey; 44% were nurses, and 12% were physicians
- 41% reported already having an AD in place, while 21% did not currently have a designated proxy
- 85% reported talking with someone about what gives their own life meaning
- 5% created an AD, and 8% edited an AD since the campaign
- 73% agreed it helped them think about ACP in a less scary way
- 83% agreed it increased interest to think about future healthcare preferences
- 79% agreed it motivated them to talk about healthcare they would want to receive at EOL with a loved one.

**Conclusions and Implications.** ACP conversations can be used to prepare anyone regardless of age, sex, culture, or disease. Asking healthcare providers, "What gives your life meaning" may familiarize them with the process of ACP and emboldened them to encourage patients to have these same crucial conversations.

### ***What Is The Goal of Care for This Patient? Documenting and Communicating Patient Goals of Care across Teams in ICU (QI820)***

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University, Portland, OR. Cynthia Perez, MS RN CNS CCRN, Oregon Health & Science University, Portland, OR. Cheri Warren, MS RN, Oregon Health & Science University, Portland, OR.

#### *Objectives*

- Describe challenges to provide care that is concordant with patient goal of care in intensive care setting.
- Discuss process and strategies to develop and implement new documentation practice to different teams.
- Discuss how to promote better communications about patient's goal of care across multiple teams working in ICU settings.

**Background.** Providing goal concordant care in ICU settings can be challenging. Clinical status of patients fluctuates daily, often hourly, thus treatment options and goals of care could change accordingly. Complex conditions require involvement of multiple specialists and teams, and understanding of the patient's goals of care may be inconsistent among them. Nurses in an ICU experienced difficulty tracking multiple providers discussing with their patient and/or families and resulting goals of care decisions.

**Aim Statement.** An ICU team initiated a quality improvement project aimed to create and implement a system for consistent documentation of goals of care conversations (GOCC) that are easily accessible to all health care team members via the electronic health record (EHR).

**Methods.** The primary stakeholders for this project were the nurses, intensivists, heart failure team, and palliative care team. In the past, providers used different methods and location in the EHR to document GOCC. We identified the Advance Care Planning (ACP) tab in our EHR as a central location for all ACP-related information including GOCC. Informatics partner created a note template to document GOCC with a function to "grab and insert" the GOCC note into the ACP tab.

**Results.** Using the note template, GOCC notes consistently appear in the ACP tab and are easily seen by all team members with 1-click in one location in a patient EHR. Following pilot test of the note template use in each team, it was disseminated to other providers as a best practice for GOCC documentation.

**Conclusions and Implications.** Development of a documentation system that fits the workflow of different teams was a key to facilitate better communication across teams. Better documentation and communication about GOCCs increase the opportunity to have meaningful GOCC with patients and likelihood to provide goal concordant care.

### *Use of Video Game Technology for Geriatric Total Pain Management Education: Response of Interdisciplinary Healthcare Students (QI821)*

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#### *Objectives*

- Describe PAIN-ME-FREE, an online video game used to teach healthcare profession students how to assess and treat total pain in older adults using a multidisciplinary approach.
- Analyze nursing and medical student perceptions of PAIN-ME-FREE as a useful education tool for geriatric total pain management.

**Background.** Pain management curriculum is rarely case based and integrative, leaving practitioners unprepared to manage an interdisciplinary and patient-centered approach to pain management. With a growing geriatric population suffering from pain, the PAIN-ME-FREE online video game was developed by UTHealth San Antonio affiliates. The game educates future healthcare providers on total pain management of elders using a multidisciplinary approach.

**Aim Statement.** To assess nursing and medical student perceptions of PAIN-ME-FREE video game as a useful educational tool for assessment and treatment of total pain among elders.

**Methods.** After completion of PAIN-ME-FREE video game, nursing (236) and medical (193) students completed an online survey. Two free response questions asking to share concepts learned and plans to implement new knowledge were answered and then analyzed thematically. The survey also contained 9 Likert scale statements that students ranked from strongly agree to strongly disagree. The Likert statements covered themes such as innovation of the tool, student comfort treating geriatric pain, and importance of the tool in healthcare education. Likert responses were analyzed with chi-square and odds ratios.

**Results.** Free responses from medical students focused on technical aspects of pain management such as proper opioid conversion, whereas nursing student responses were more patient-centric including fall risk and mental status assessment. Likert responses demonstrated that over 67% of medical and 82% of

nursing students either agreed or strongly agreed that the game was innovative and important to their healthcare education. Nursing students demonstrated increased comfort with interdisciplinary team involvement in geriatric pain management (OR 2.1,  $p < .05$ ) and treatment of geriatric pain (OR 1.6,  $p < .05$ ) when compared to medical students.

**Conclusions and Implications.** PAIN-ME-FREE is applicable for multidisciplinary use as a geriatric total pain management educational tool. Perceptions of the game may differ depending on discipline specific educational philosophies and previous academic exposures.

### *The Deprescribing Conversation Project (QI822)*

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#### *Objectives*

- Describe the attitudes and perceptions of hospice nurses toward deprescribing conversations before and after viewing the pharmacist-created deprescribing videos.
- Recognize the potential impact of nurse-pharmacist collaboration in deprescribing conversations.

**Original Research Background.** Nurses are frequently frontline providers for patients nearing the end of life and are often expected to deliver precise communication regarding futile treatments and unnecessary medications to patients and families. These conversations can be challenging for nurses as well as emotional for patients and families. Pharmacists with their unique knowledge of pharmacotherapy, including medication time-to-benefit and medication risk-to-benefit profiles, may be able to provide nurses with the “words” for difficult deprescribing conversations.

**Research Objectives.** The purpose of this project was to enhance hospice nurses’ knowledge and comfort with deprescribing conversations by providing a structured dialogue for discussing the benefits and burdens of drug therapy in patients with limited life expectancies.

**Methods.** Two patient-nurse vignettes were scripted by a hospice pharmacist and filmed using student pharmacist actors. Each video captured a common deprescribing situation—cholinesterase inhibitor therapy in advanced dementia and inhaler polypharmacy in chronic lung disease. Using Camtasia® video

editing software, text overlay was created to highlight a step-by-step approach for initiating deprescribing conversations and to reinforce various communication strategies. Hospices nurses from two hospices viewed these videos and completed a pre- and post-survey regarding their perceptions and comfort with deprescribing conversations.

**Results.** Six nurses completed both the pre- and post-surveys. After viewing the videos, all nurses reported increased comfort with deprescribing conversations and indicated that they planned to incorporate communication strategies from the videos into their own practices. Five of the six nurses indicated that they were more likely to engage in deprescribing conversations with patients and families after viewing the videos.

**Conclusion.** A structured approach to deprescribing conversations—modeled by pharmacists and viewed by nurses—improved nurses' comfort level with and attitudes toward deprescribing conversations.

**Implications for Research, Policy, or Practice.** Collaboration among nurses and pharmacists in end-of-life care has the potential to increase the quality and quantity of nurse-initiated deprescribing conversations.

### ***Social Worker as Leader on the Inpatient Consult Service: An Innovative Model for Palliative Care Delivery (QI823)***



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#### *Objectives*

- Recognize the untapped potential for social work leadership in palliative care program development.
- Understand how to analyze clinical needs and match with internal team resources in order to maximize efficiency and improve access to palliative care.

**Original Research Background.** With a critical shortage of palliative care specialists, it is paramount to find innovative models to provide palliative care. Social workers are an integral part of palliative care teams but often are not viewed as leaders on inpatient consult services.

**Research Objectives.** We evaluated the feasibility, acceptability, and consult volume of a social worker—

driven consult service compared to a clinician-led program.

**Methods.** We analyzed our referral patterns and identified a smaller consult volume, lower medical acuity, and greater need for goals-of-care discussions at our 320-bed community hospital. We developed a model dependent on a full-time social worker who triaged and managed consults, as well as promoted the service through strategic relationship-building, inter-professional education and peer mentoring. The social worker worked alongside referring clinicians during family meetings and provided expert psychosocial support. The palliative care physician provided phone support for referring clinicians and performed in-person consults for symptom management as directed by the social worker.

**Results.** This model was piloted for 5 months and the numbers of social worker and physician consults were documented. This was compared with the previous 6-month service data via phone consultation only and through clinician presence respectively at the same hospital. The hospital had an average of 720 admissions/month during the studied time period. In the 6-months prior to the pilot, the monthly average penetration rate for palliative care at the hospital was 1.13% for telephone coverage and 1.38% for coverage with one clinician. Under the social worker led model, the penetration rate increased to 2.84%.

**Conclusion.** Our pilot program demonstrates that a social worker-led service is an effective, feasible way to provide palliative care at a lower-acuity hospital.

**Implications for Research, Policy, or Practice.** Our success with this approach may inform similar efforts at other hospitals facing clinician shortages, while simultaneously empowering social workers as program leaders and educators.

### ***Measuring What Matters (MWM): Building an Informatics Foundation for Quality Improvement with Automatic Data Capture and Enrollment into a Patient Registry (QI824)***



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#### *Objectives*

- Identify and use at least one electronic data item to identify palliative care patients with HER.
- Review of the poster, the learners will be able to identify the clinical workflows that capture specific Measuring What Matter quality indicators.

**Background.** Palliative care programs are increasingly asked to report on performance metrics. These include the Measuring What Matters (MWM) quality metrics, utilization, and outcome data. Capturing these data is cumbersome and time-consuming. Electronic health records (EHRs) already store the data that identify relevant patients and describe needed metrics. We have been developing informatics strategies to capture such essential data. Since 2013, we have had great success in capturing patient reported symptom burden via the patient portal.

**Aim Statement.** Develop an electronic patient registry within the EHR that automatically enroll patients based on pre-specified criteria. Develop informatics tools to capture symptom assessment within the practitioner usual documentation workflow.

**Methods.** Palliative care patients are automatically enrolled into an electronic patient registry using clinic locations, encounter providers, and inpatient consultation orders as criteria. We embedded drop-down lists in inpatient note templates to capture screening for pain and use of pain medication as discrete data.

**Results.** Set to look back for 2 years, the registry became operational on June 15, 2017; over 7,800 unique patients are enrolled to date. Reports of operational metrics or patient outcomes can be readily generated based on this patient database. Between April 7, 2017, and June 29, 2017, 1,350 inpatient notes were generated (334 for initial consultations and 1,016 for follow-up visits). The note templates were used in 64.3% of all notes. MWM#2 (screening for pain) and MWM#3 (pain treatment) were successfully captured in 45% and 55% of all encounters respectively.

**Conclusions and Implications.** An EHR-based patient registry is effective in maintaining a current and accurate list of palliative care patients. Embedded mechanism to capture MWM quality metrics during clinical documentation succeeded approximately half the time. Together, with more widespread adoption, these two strategies could form the basis for efficient and reliable data reporting that support quality improvement efforts. Practitioners' time pressure and usability concerns remain significant challenges toward universal adoption.

*Advanced Care Planning Initiative in  
Outpatient Geriatric and Palliative Care  
(QI825)*

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Manhasset, NY. Doreen Devins, BSN, Northwell Geriatric and Palliative Medicine, Great Neck, NY. Kathleen Busardo, AAS, Northwell Health, Great Neck, NY. Maria Carney, MD, Long Island Jewish Medical Center, Manhasset, NY.

*Objectives*

- Improve outpatient ACP discussions and documentation.
- Educate providers and learners about the importance of these discussions and ensure proper, consistent, documentation is in the chart.

**Background.** In January 2016, CMS began reimbursement for advance care planning (ACP) conversations with patients to establish goals of care (GOC) for their future. Studies have shown patients prefer their physician to initiate these conversations. Outpatient offices provide an ideal setting to address and hold ACP conversations to establish GOC before a health event or crisis, rather than in the ED or ICU.

**Aim Statement.** Our goal is to improve outpatient ACP discussions and documentation. We also look to educate providers and learners about the importance of these discussions and ensure proper, consistent, documentation is in the chart.

**Methods.** Each patient is provided information about health care proxies (HCP), Medical Orders for Life-Sustaining Treatment (MOLST) forms, and/or goals of care. Our team assists with completion of HCP or MOLST, if applicable, in office. There is then documentation of ACP preferences in a specifically identified area of the patient's chart in the EMR, which is readily visible to outside providers. Each week, an office staff nurse audits two charts/provider/week (56/month) to see if ACP have been addressed. The data is then reviewed with the providers at the monthly faculty meetings. Upon review with the providers at the faculty meeting, barriers are identified and solutions are discussed and shared.

**Results.** Through this quality improvement project there has been an increase in ACP discussions and documentation. At the start of the project there were 31.5 of the 56 charts (56.3%) had ACP documentation. Within 6 months that rate had increased to 40.6 of the 56 charts (72.5%). And after 3 more months, it increased to 51 of 56 charts (91%).

**Conclusions and Implications.** Through comprehensive evaluation of office processes and identification of barriers and possible solutions we were able to demonstrate significant improvement on ACP discussion and documentation in an outpatient office setting.



### ***Conversations of a Lifetime: Developing Primary Palliative Care Skills Through Simulation-Based Training (QI826)***



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#### *Objectives*

- Recognize the value of using quality improvement methods in teaching primary palliative care skills.
- Describe the role of simulation-based training in improving communication about goals of care.

**Background.** The communication skills required to integrate complex medical issues with patient-centered values go beyond the basic interviewing skills taught in medical school. As the US population ages, the number of patients with advanced, chronic, life-limiting illness will only grow, many of whom will have multiple comorbid conditions. Resident physicians are often at the front lines in caring for these patients. Therefore, it is critical that residents learn to engage patients in conversations about their goals and values while also informing them of their disease trajectory and the burdens and benefits of their treatment options.

**Aim Statement.** Increase residents' self-reported preparedness in having conversations about goals of care.

**Methods.** Half-day workshop using didactics and skills practice with standardized patients trained by Hospice of Cincinnati. Content focused on breaking bad news, responding to emotion, eliciting patients' goals, discussing uncertainty, transitioning from curative to comfort care, and discussing death and dying. Participants were internal medicine residents of TriHealth (N = 28). Surveys measured prior training, pre-course self-assessment, and immediate post-course and long-term perceived changes in communication skills and clinical practice using open- and closed-ended questions.

**Results.** Response rate was 100% (pre- and post-course) and 93% (at follow-up). Participants reported improvement in all domains and sustained improvement at follow-up ( $p < 0.05$ ). Participants also described detailed changes to their daily clinical practice.

**Conclusions and Implications.** An interactive communication skills-building course can have a meaningful impact on residents' perceived preparedness and attitudes in having goals of care conversations. Our findings highlight the need for structured education on communication skills with direct observation and feedback in residency training.

### ***A Retrospective Review of the Role of Palliative Care in Patients Evaluated for Left Ventricular Device Implantation (QI827)***



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#### *Objectives*

- Identify outcomes of patients undergoing LVAD evaluation.
- Identify demographics of population undergoing LVAD evaluation.

**Background.** Left Ventricular Assist Device (LVAD) is a therapy that can prolong life in advanced heart failure patients. This population and their caregivers can have significant physical, emotional, and psychosocial needs. In October 2014, to improve the quality of care for this population, the Joint Commission recommended Palliative Care be added to the core interdisciplinary team. In 2016, North Shore University Hospital (NSUH) started their LVAD program and collaborated with the Geriatrics and Palliative (GAP) Care team to meet this quality measure.

**Aim Statement.** Identify needs and outcomes of patients evaluated for LVAD implantation.

**Methods.** The LVAD team identified patients with advanced heart failure who may need an LVAD implantation, and GAP team was consulted for such patients as part of the comprehensive evaluation. In a retrospective review, we examined designation of a healthcare proxy, disposition, readmission and length of stay in patients who underwent evaluation for an LVAD but did not receive an implantation. In addition, the multifactorial needs of LVAD patients were identified.

**Results.** Between 2016 and 2017, the LVAD program evaluated 50 patients, of which 20 received an implantation. The NSUH GAP team consulted on 44 of the patients, with 26 of them not receiving an implantation. Of the 26 patients, the average age was 59, 95% male, with English as the primary language. African Americans/ multiracial patients comprised the majority of patients (59%). 63% did not have a healthcare proxy identified. 22.7% of the patients expired in the hospital and 59% had a greater length of stay of more than 15 days.

**Conclusions and Implications.** The number of patients who expired highlights the need to explore patients' and families' wishes as part of preparedness planning. Given the number of readmissions, close collaboration is needed in the outpatient setting to address complications that may prevent a re-hospitalization.

### **Advance Care Planning: With Whom and When? (QI828)**



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#### *Objectives*

- Describe the benefits to using a Severity of Illness tool to identify seriously ill cancer patients who may benefit from Advance Care Planning (ACP) and palliative care in the hospitalized setting.
- Identify the barriers to implementing a standardized method to improve access to ACP and palliative care in an inpatient setting.

**Background.** In cancer patients, goals of care discussions tend to occur in the last few months of life. A systematic method that identifies seriously ill patients early in their admission may encourage consistent advanced care planning (ACP) and improve access to palliative care.

**Aim Statement.** To standardize: 1) triggers for ACP for hospitalized patients with advanced cancer; and 2) ACP documentation in the Electronic Medical Record (EMR).

**Methods.** A novel Severity of Illness (SOI) tool was created. ACP and/or palliative care consults were indicated within 72 hours for those who scored 4 or greater on the tool. All patients admitted to the hematology-oncology (hem/onc) service over a 6-month period were scored during multidisciplinary rounds. Retrospective chart reviews determined whether the proposed interventions were completed. The SOI tool was validated via retrospective chart reviews on a separate cohort of patients. Providers were surveyed regarding their perception of ACP.

**Results.** 352 patients admitted to the hem/onc inpatient service were scored using the SOI tool. 111 (31.53 %) of these patients received a score of 4 or greater; 53 (47.74%) of this group received a palliative care consult and/or ACP. While all survey respondents felt that ACP was an important part of patient care, 33% indicated provider discomfort with ACP and 63% of respondents believed an electronic trigger would be helpful in prompting initiation of ACP.

**Conclusions and Implications.** The SOI tool alone did not translate into consistent application of interventions. Barriers included inconsistent communication among providers and inconsistent use of the ACP documentation template, creating ambiguity regarding previously held ACP discussions. The

data highlights the need to formalize the use of the SOI tool. There is a need for broader education about ACP. This research has the potential to improve the quality of care seriously ill cancer patients receive through earlier identification of patients that would benefit from ACP and palliative care involvement.

### **Proactive Screening of Cancer Inpatients for Palliative Care (QI829)**



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#### *Objectives*

- Understand how to look for opportunities at their own institution for pro-active screening in targeted patient populations.
- Understand how to look for opportunities at their own institution to integrate generalist palliative care education into peer subspecialty rounds.

**Original Research Background.** Hospitalized patients with cancer are often referred late (or not at all) to palliative care, which can delay effective control of symptoms and goals-of-care conversations. Earlier palliative care referrals are associated with better quality of life and lower inpatient costs.

**Research Objectives.** We tested the feasibility of a process to trigger more oncology consults within 24-48 hours of admission and empower non-physician hospital staff to identify patients with palliative care needs.

**Methods.** The palliative care team joined a multidisciplinary oncology rounds with nurses, social workers, case managers and oncology fellows every weekday for 4 weeks. We introduced a standardized trigger tool and triaged specialty-level consults versus “advice only” curbsides with coaching in generalist palliative care. We obtained buy-in from oncology attendings for automatic consults based on the trigger tool and multidisciplinary request.

**Results.** The palliative care team saw twice as many oncology patients compared to previous months (24 vs. 11 per month). There was no significant increase in early referrals (8 vs. 6 per month), likely due to lack of on-site coverage on weekends. The team had an almost-equal number of “advice only” curbsides compared to early billable consults. An informal staff survey found the shared rounds improved their sense of teamwork and communication about their sickest patients. The palliative care team improved its workflow by obtaining consults earlier in the day and

communicating more directly and efficiently with the hospital teams.

**Conclusion.** Our pilot program demonstrated a trend towards greater (but not earlier) consult volume, enhanced teamwork, improved relationships and empowerment of non-physician care providers to identify patients' palliative care needs. More data is needed to understand how this approach impacts patient outcomes and health care utilization.

**Implications for Research, Policy, or Practice.** A relationship-based, multidisciplinary process for proactive patient screening can simultaneously increase access to specialty palliative care and provide opportunities for real-time generalist education.

### *Improving Relationships: Initiating a Collaborative Project Between the Neurosurgical Care Unit and Palliative Care Unit (QI830)*



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#### *Objectives*

- Demonstrate the necessity and benefits of Palliative collaboration in the identification and treatment of neurocritically ill patients who would benefit from palliative medicine.
- Understanding the importance of interdisciplinary collaboration in fulfilling standards set through quality palliative metrics.

**Background.** Of the more than 500 patients admitted to the Palliative Care Unit (PCU) at North Shore University Hospital (NSUH) in 2016, only 84 (16%) were from the Neurosurgical Care Unit (NSCU). Preliminary data indicated that most of those 84 patients were seen within one week of hospitalization, but many expired within 24 hours of transfer. Many of these patients (and their families) could have benefitted from the services offered by our Geriatric and Palliative (GAP) team.

**Aim Statement.** The goals of this project are to 1) collaborate with the NSCU team to identify patients and families who could potentially benefit from a palliative consult early in their hospital stay, and 2) to assess the impact of this collaboration on quality palliative metrics.

**Methods.** A GAP Nurse Practitioner began attending a bi-weekly morning huddle with the NSCU team. Automatic triggers included patients with an ICH score > 4, but any patient deemed a potential beneficiary was seen by the GAP team.

**Results.** 29 consults were requested in June, 3 of which were triggered by ICH score > 4. Of those 29 patients, 17 were transferred to the PCU for end of life care. Days-to-Consult dropped from an average of 5.3 in 2016 to 4.2 in June 2017. Consult-to-Transfer days dropped from 4.6 in 2016 to 2.3 in June 2017. The automatic trigger of ICH score > 4 has become ancillary to the project as the presence of a GAP team member within the interdisciplinary team in the NSCU has proved the greatest benefit.

**Conclusion.** The GAP-NSCU huddle has been enormously successful in early identification of neurocritically ill patients who would benefit from palliative consultation. In just a single month we have transferred 17 NSCU patients, after transferring 48 all of last year.

### *Implementation of Electronic Patient-Reported Outcomes (PRO) in Outpatient Oncology Palliative Medicine (PM) Consults (QI831)*



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#### *Objectives*

- List at least 3 symptoms screened in an electronic PRO tool.
- Describe usability of an electronic PRO tool including the average completion rate and duration for completion of each screen.

**Background.** PROs are an important component of oncology care that allows patients to measure their perceptions of their symptoms, functional status, and well-being. Evidence has demonstrated benefits in survival, quality of life, and symptom control. Systematic collection of PROs in the oncology PM setting, where distress and symptom burden is typically high, benefits both the individual patient care plan and monitoring of population level outcomes.

**Aim Statement.** To assess utilization and effectiveness of an electronic PRO screening tool for new outpatient oncology PM patients.

**Methods.** The oncology PM clinic implemented a tablet-based PRO screening tool available in English or Spanish with a total of 39 questions including 11 symptom scales (0-10) and four validated screens for anxiety/depression, nutrition, spirituality, and function. Patients were provided the tablet at check-in, and completed results were integrated into the electronic medical record. Average completion time was 8 minutes. The PRO results were reviewed by the PM team during the consult to assist with clinical decision-making and referrals.

**Results.** During the first six months of 2017, 85% (n=151) of new oncology PM patients completed the PRO tool. The average fatigue score (0-10) was 6.6, pain 6.1, and nausea 2.5. Patients ranked depression 1.2 and anxiety 0.9 on a 0-3 scale. Anorexia was reported in 52% (n=78) with 32% reporting weight loss of greater than 13 lbs. Functional deficits were reported in 11% (n=16).

**Conclusions and Implications.** Electronic PROs provide an effective way to screen new patients to oncology PM for distress and uncontrolled symptoms during the initial consultation. Results of the screening tool allowed the PM team to address issues that may not have been spontaneously offered by the patient, and triggered referrals to cancer support services (i.e. nutrition, psychotherapy) and other medical specialties.

### *Leveraging the Electronic Health Record to Seamlessly Capture Quality (QI832)*



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#### *Objectives*

- Discuss the Quality Data Collection Assessment Tool (QDACT) as a template for local and national data collection.
- Describe the process of integrating QDACT into the electronic health record.
- Identify challenges, successes and lessons learned one-year after integration of national quality metrics into the electronic health record.

**Background.** Prospective quality measurement is critical to the delivery of high quality palliative care and value-based payment. The foundational work of Measuring What Matters and The Joint Commission (JC) Advanced Certification in Palliative Care has led the way in establishing a set of national quality palliative care metrics. However, there remains a limited understanding of how to implement palliative care quality measures into routine real-world clinical settings and merge seamlessly into clinician workload.

**Aim Statement.** To integrate QDACT into the EHR, streamlined into the clinician workflow to improve efficiency of data collection of national quality measures and clinical charting.

**Methods.** Five guiding principles were identified for the integration of national quality measures into the EHR (Epic) that can be adapted to other EHR systems. The five guiding principles for the EHR-QDACT

integration were: 1) data would be entered by the clinician at each patient encounter; 2) the final product would be user friendly; 3) different disciplines could access QDACT for improved efficiency and integration into the clinical workflow; 4) data would auto-populate into clinical notes for improved efficiency; and 5) Epic reports could be built to fulfill The JC mandatory performance measures reporting requirements.

**Results.** EHR-QDACT integration led to improvements and ease of documenting the 5 JC Palliative Care mandatory measures from December 2016 to June 2017: (1) PAL-01 Pain Screening and PAL-03 Dyspnea Screening stayed at 100% documentation pre- and post-integration; (2) PAL-02 Pain Assessment documentation increased from 57% to 100%; (3) PAL-04 Treatment Preferences and Goals of Care documentation increased from 56% to 98%; and (4) PAL-05 Treatment Preferences on the Discharge Document increased from 41% to 93%.

**Conclusions and Implications.** QDACT was successfully integrated into the EHR, streamlined into clinician workflow to improve efficiency of data collection and clinical charting, and fulfilled the documentation and tracking of The JC Advanced Certification in Palliative Care mandatory measures.

### *Integration of Primary Palliative Care in the ICU: The Critical Care Nurse Communicator Program (QI833)*



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#### *Objectives*

- Identify at least three elements of the initial, palliative-focused visit, the Nurse Communication Coordinators use with patients and families.
- Describe at least two evidence based shared decision making interventions the Nurse Communication Coordinators utilize to better align the treatment plan with patient's goals, values, and preferences.

**Background.** Critically ill patients and their families face complex, challenging decisions in the Intensive Care Unit (ICU). Evidence suggests that communication in the ICU is often poor, contributing to family distress. The ICU presents an opportunity to improve goals of care conversations, enhance shared decision making, and reduce family distress.

**Aim Statement.** The Critical Care Nurse Communicator Program aims to improve shared decision making in the ICU and ensure the treatment plan aligns with what matters most to the patient. Through the

integration of a palliative-trained Nurse Communication Coordinator (NCC) in the ICU, we hope to improve communication, improve patient/family satisfaction, improve provider perceptions of the quality of palliative care in the ICU, reduce family distress, and decrease resource utilization.

**Methods.** Implemented in February 2017 in a 24-bed medical/surgical ICU at the University of Wisconsin Hospital, two full-time NCCs focus on patients with high risk for morbidity, mortality, and/or irreversible functional decline. Primary responsibilities include (a) management of an ICU family meeting protocol (b) consistent implementation of shared decision making elements during family meetings (c) use of evidence-based shared decision making tools, and (d) daily visits with patients and families to integrate psychological, cultural, and spiritual aspects of care, as well as the patient's goals, values, and treatment preferences into the plan of care.

**Results.** Early results show improved quality and consistency of family meetings as well as positive feedback from patients, families, and staff. Ongoing program evaluation includes: patient/family satisfaction, provider perceptions of the quality of palliative care, post-discharge family member depression and PTSD, and ICU resource utilization.

**Conclusion.** Preliminary results show the implementation of a palliative-trained NCC in the ICU can improve the consistency and quality of communication. Additional time and data is required to assess program impact on patient/family satisfaction, family member distress, provider perceptions of the quality of palliative care, and ICU resource utilization.

### *The Pink Book—Quantifying Demand for Digital Palliative Care References (QI834)*



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#### *Objectives*

- Recognize pinkbook.dfcf.org as a free digital resource for palliative care content.
- Recognize the Pink Book handbook utility.

**Background.** “The Dana-Farber Cancer Institute/Brigham and Women’s Hospital Pain Management Table and Guidelines” pocket reference is a convenient handbook that palliative care clinicians at Dana-Farber Cancer Institute (DFCI) have maintained for clinicians, learners, housestaff, and fellows rotating through DFCI since 1998. The handbook, also known as the Pink Book, has been mainly distributed in a

limited quantity hard copy format with a PDF format electronic copy available through unofficial channels. In May of 2017, we created a free website, pinkbook.dfcf.org as the official home of the Pink Book, along with its companion reference books for nausea (Green Book) and pediatric symptoms (Blue Book). We report metrics from pinkbook.dfcf.org over the initial three months since its release.

**Aim Statement.** To quantify demand of digital palliative care resources, we report the usage metrics of pinkbook.dfcf.org over the initial three months of release of the website.

**Methods.** We implemented an analytics platform, Angelfish web analytics (analytics.angelfishstats.com/) to pinkbook.dfcf.org. We describe usage rates of the website from 5/1/17-7/31/17 via the analytics platform.

**Results.** Since release, pinkbook.dfcf.org has had 2,652 unique visitors with 6,662 page views from these visitors. 893 visitors used mobile devices (iPhone, iPad, Android). The majority of visitors were from the United States (2,002) with California (272), Massachusetts (216), and New York (197) being the top three states using pinkbook.dfcf.org. A total of 1,193 Pink Book PDFs were downloaded over the three month time period. The Green Book was downloaded 533 times while the Blue book was downloaded 402 times. Total downloads for all books was 2,128 PDFs.

**Conclusions and Implications.** During the first three months of its release, pinkbook.dfcf.org saw 2,652 unique visitors, worldwide. Over 80 percent of visitors of pinkbook.dfcf.org downloaded one of the reference books on the site. This suggests an ongoing demand for digital palliative care resources.

### *The GAP-ED Project: Improving Care for Frail and Elderly Patients Presenting to the Emergency Department (QI835)*



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#### *Objectives*

- Describe the benefits of a Geriatric Social Worker in an Emergency Department.
- Recognize issue of vulnerable elderly population using Emergency Department for non-emergent medical issues.

**Background.** Older adults in the ED are a vulnerable population at risk of return visits, unnecessary hospitalization, and death. ED admissions data at Long Island Jewish Medical Center (LIJMC) revealed an elderly population with multiple revisits for non-

emergency medical care. The Geriatric and Palliative (GAP) Division and ED at LIJMC implemented a multidisciplinary GAP-ED Team, delivering geriatric and palliative expertise to the ED.

**Aim Statement.** We aimed to reduce 30-day ED revisit and hospitalization rates of older adults presenting to the ER by providing comprehensive geriatric and palliative care assessments, discussing Goals of Care, linking patients to community resources, and coordinating care upon discharge.

**Methods.** The GAP-ED Specialist, a geriatric social worker, identified ED patients who met inclusion criteria ( $\geq 65$  years of age, community-dwelling, discharged home, had medical/social co-morbidities increasing risk of recidivism.)

The Specialist assessed medical conditions, medication reconciliation, psychosocial needs, and discussed Goals of Care. The Specialist also connected patients to community-based resources and followed up by phone at 3, 7, and 30 days post-discharge.

**Results.** 370 patients met the inclusion criteria. Advance directives were established for 96% of patients. There was a reduction in 30-day revisit rates to 22.5%, and in hospitalization rates from 53.4% to 32.0%. 91.4% of surveyed GAP-ED patients believed the Specialist was helpful in providing support and resources; 85.7% believed all ED's should have the GAP-ED initiative. Patients and families were appreciative of the assistance and focus on their needs. Post-discharge, the GAP-ED Specialist improved communication and turnaround time in delivering services to patients.

**Conclusions and Implications.** The reduction in 30-day ED revisit and hospitalization rates suggests the GAP-ED Team improved the quality of care and outcomes for at-risk elderly patients. Reduction of non-emergent ED use concurrently reduces the dangerous complications often experienced by older adults while in the hospital and decompresses the ED. Furthermore, the emotional support provided to patients and their caregivers left a lasting impact and improved their healthcare experience.

### **Rapid Response Team-Driven Palliative Care Consults: A Case Series (QI836)**

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#### *Objectives*

- Describe a novel palliative care referral process driven by hospital-based Rapid Response Teams.
- Evaluate characteristics and outcomes of patients who have received palliative consultation after Rapid Response Team referral.

**Background.** Rapid response events, often critical moments for seriously ill patients, present as clear opportunities for symptom management, for clarification of goals, and for complex shared decision making. Nevertheless, optimal processes to involve specialty palliative care (PC) in this setting have not been described. At our institution, RRT and PC leaders initiated a quality improvement (QI) project to increase appropriate referrals to PC arising from rapid response events.

**Aim Statement.** To evaluate the effectiveness of a RRT-driven PC consultation QI project.

**Methods.** RRT physicians and nurses received basic education about PC and this QI initiative. In this first QI phase, we explicitly chose not to employ consult triggers but to leave RRT identification of potential PC consults to "rapid response patients whom you think might benefit from PC." After confirming the reason for PC consultation with the primary team, the PC team engaged. To evaluate this case series, data was gathered from retrospective EHR review and analyzed using descriptive statistics.

**Results.** In the first 4 months of this QI project, hospital RRTs identified 15 patients for potential PC consultation. Primary attendings agreed to all consult referrals. Patients were generally older (median age 74, range 59-94), 53% female, had median hospital length-of-stay 18 days (range 2-120 days) with a median 12 days to PC consult. Twenty-seven percent of patients had more than 1 rapid response event prior to PC consult. The most common indication for rapid responses was respiratory distress (47%); almost half of patients (47%) had an underlying diagnosis of cancer. In addition to acute symptom management, PC consultation resulted in do-not-resuscitate orders (60%), hospice dispositions (30%), in-hospital end-of-life care (40%), and one decision to forego hemodialysis.

**Conclusions and Implications.** This early-phase RRT-driven referral process successfully identified patients who benefitted from specialty PC. Next steps include identification of specific referral triggers and wider dissemination of RRT referral process.

### **Implementing Early Pediatric Palliative Care for Patients in the Pediatric Intensive Care Unit (QI837)**

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#### *Objectives*

- Create a standardized criteria for pediatric palliative care consultation using a systemic approach.
- Discuss the need of a formal Palliative consult to be discussed daily in interprofessional rounds.

**Background.** The number of palliative care consults prior to standardized criteria was low and goal was to change practice and culture to increase number of consults and improve timing. The interprofessional team reviewed CAPC criteria and added additional criteria based on population needs in the PICU.

**Aim Statement.** The purpose of this quality improvement project was to develop a structured process to identify patients who would most benefit from early palliative care. Interventions included developing standardized criteria for pediatric palliative care consultation using a systemic approach, providing nursing and provider education regarding the new process and criteria, the importance of palliative care, and addition of palliative consultation to the PICU admission order set and daily rounding checklist.

**Methods.** A single center retrospective chart review from January 2014 through December 2016 was completed. Criteria were evaluated to see if it was used for the intended patients, if consults were generated, and if there were any measurable outcomes. Specific attention to if the interventions decreased the length of time between admission to the PICU to placement of palliative consultation as well as volume of consultation.

**Results.** During the evaluation period the consultation rate increased from 3.5% to 13% of patients seen in PICU and the time between PICU admission and palliative care consultation decreased from approximately 10 days to 3.5 days.

**Conclusions and Implications.** While Initial data looks promising, with the increasing number of consults and the decreased time frame from PICU admission to placement of consult, further assessment is necessary to assess effectiveness and sustainability of palliative care criteria. Data will continue to be collected and assessed through 2017.

### **Story Time with Pediatric Palliative Care: A Community Self-Care Strategy (QI838)**

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#### *Objectives*

- Identify a simple, effective way to facilitate self-care among hospital team members.
- Describe the impact story time has had on the attendees' daily practice and self-care strategies.

**Background.** Story time was born out of a photograph posted on social media depicting members of the hospital's pediatric palliative care team conducting story time in their office as a method of self-care amidst a difficult day. After seeing the photo, hospital associates began requesting the expansion of this activity to others within the hospital community. The first story time was held with participants representing nursing, social work, child life, physicians, residents, medical students, and members of the hospital's foundation. Following the first story time, additional requests were received and is now held every two weeks.

**Aim Statement.** To increase awareness regarding the importance of self-care and providing an avenue for this practice among pediatric team members at a large children's hospital.

**Methods.** Story time is conducted outside, weather permitting, and limited to 15-30 minutes in duration. Blankets are placed on the ground to allow for relaxing on the grass while a child's storybook is read. Initially, children's bereavement books were read to increase awareness of available age appropriate books written about pediatric loss and grief. Nostalgic snacks are provided at each story time. Communication regarding story time events is shared using social media and word of mouth. Surveys were completed by attendees following multiple sessions.

**Results.** Participants describe enjoying a moment of their day that allows them to escape through a children's book and snacks. They feel this activity provides a simple, non-intrusive part of their day allowing time for self-care and refocusing of their workday. They also voice appreciation for the opportunity to strengthen community resilience and support.

**Conclusions and Implications.** Story time is a simple, low-cost method of promoting and facilitating self-care among pediatric team members across the hospital and appropriate for all disciplines. A mission of this pediatric palliative care team is to promote wellness for all hospital associates and strive to find ways to build a supportive hospital community.