Virtual Nursing Research Day Poster Showcase 2020©

Massachusetts General Hospital

The Yvonne L. Munn Center for Nursing Research and
The Nursing Research Day Planning Committee

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EVIDENCE BASED PRACTICE POSTERS
IDENTIFYING AND ADDRESSING THE BARRIERS TO KANGAROO CARE IN CRITICALLY ILL OR PRETERM INFANTS

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Massachusetts General Hospital, Boston, MA

Kangaroo care is a method of holding an infant, dressed only in a diaper, on the parent's bare chest. The benefits to the infant include decreased pain perception and stress response, as well as improvements in parent-infant bonding, physiologic stability, immunity, neurodevelopment, and breastfeeding. Benefits for parents are enhancements in competence in parenting role, breast milk production and breastfeeding longevity. Despite these benefits, it is not practiced as standard of care for many critically ill or preterm infants. We searched the literature to discover the barriers to daily kangaroo care in our neonatal population.

What are the barriers to implementing daily kangaroo care as compared to standard in-arms holding for critically ill or preterm infants?

Kangaroo care is a well-documented, evidence-based intervention with positive effects for infants and families. By addressing the barriers to providing daily kangaroo care, it is possible to improve outcomes for infants and families, promote parental caregiving confidence, and decrease length of stay. A Kangaroo Care Guideline has been created, and we are developing multi-media staff and parent education. This includes parent educational brochure, video demonstrating transfer of baby for kangaroo care, staff educational slides with in-person discussions, and nursing journal club presentation/discussion.
Patients on an acute medical unit with multiple comorbidities, specifically renal failure (RF) and congestive heart failure (CHF), are frequently receiving large volume (4L) polyethylene glycol (PEG) colonoscopy preparation. The current practice heightens concern about triggering fluid volume overload.

**PRACTICE ISSUE**
- Patients on an acute medical unit with multiple comorbidities, specifically renal failure (RF) and congestive heart failure (CHF), are frequently receiving large volume (4L) polyethylene glycol (PEG) colonoscopy preparation.
- The current practice heightens concern about triggering fluid volume overload.

**PICO QUESTION**
In patients with RF and CHF that are preparing for a colonoscopy (P) is a low volume preparation (I) more effective than standard care (C) in reducing volume overload associated with the preparation (O)?

**METHOD FOR SYNTHESIS OF EVIDENCE**
- Literature search limited to peer reviewed English language studies, years 2016-2019 using CINAHL, OVID Nursing and OVID Medline.
- The Johns Hopkins Nursing Evidence-Based Practice model was utilized to evaluate the evidence.
- Type of bowel preparation, volume of preparation, type of setting, end-points of the studies, sample size, evidence level, quality and limitations were considered prior to synthesizing the evidence to evaluate fit, feasibility and appropriateness of potential recommendations.

**RECOMMENDATION FOR PRACTICE OUTCOME**
- All were good quality.
- Three Level 1 articles compared low volume (2L) with standard volume (4L) and found comparable quality of preparation and adverse effects and an increase in patient tolerability with 2L preparation.
- Only one study included patients with RF or CHF.

**IMPLICATIONS FOR NURSING PRACTICE**
- There is a need for a quality improvement project trialing the 2L PEG prep in low risk patients.
- Subsequent need to conduct original research using the new bowel preparation protocol on patients with RF or CHF.
- Collaborate with the gastroenterologists to review findings of EBP project and recommendations about changes in the colonoscopy prep protocol.

**EPILOGUE**
- In July 2020, Gastroenterologists at the institution shifted to a new low volume prep as a result of the publication of a Systematic Review, after the conclusion of this EBP project but during the COVID-19 pandemic and surge.
- This change will hopefully improve tolerance of the colonoscopy prep.
BACKGROUND AND SIGNIFICANCE

- Oncology patients in Phase I clinical trials receive study medications administered for the first time in humans. Patients need to be monitored closely by health professionals for dose-limiting toxicities during the first cycle of a clinical trial.
- Current practice is to provide contact information for the unit, expecting patients to be self-directed about calling to report new symptoms or concerns. This practice predisposes patients to possible unrelieved side effects, unscheduled clinic or Emergency Department (ED) visits, and the potential of withdrawal from the clinical trial.
- Telehealth is defined by the Health Resources and Services Administration (HRSA) as “… telecommunication technologies to support long-distance clinical health care, patient and professional health-related education. Technologies include video-conferencing, the internet and wireless communications.”¹
- Telehealth reduces anxiety during cancer treatment, as measured by decreased anxiety scores on the State-Trait Anxiety Inventory.²
- Use of telehealth can promote early mitigation of side effects and complications for cancer patients.³
- Utilizing videoconferencing as a delivery method for education can enhance patient care.⁴

THE EVIDENCE

<table>
<thead>
<tr>
<th>Literature Search: 2013-2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Databases Searched: Pubmed, Ovid, CINAHL</td>
</tr>
<tr>
<td>Inclusion Criteria: Adult oncology patients, English language studies</td>
</tr>
<tr>
<td>Key Words: Telehealth, Videoconferencing, Nursing, Oncology, Phase I oncology trials</td>
</tr>
<tr>
<td>Results: 10 citations</td>
</tr>
<tr>
<td>Eligible for inclusion: 4</td>
</tr>
<tr>
<td>Method of Synthesis of Evidence: Johns Hopkins Nursing Evidence-Based Practice Model</td>
</tr>
</tbody>
</table>

RESULTS

Four eligible studies included:
- Three Level I High Quality Studies:
  1. Comparison of the effectiveness of education provided through videoconferencing versus clinic visits on pain coping skills of cancer patients. Results demonstrated greater adherence, fewer days to complete the coping skills intervention, and greater engagement in practice skills by patients participating in videoconferencing than attending clinic appointments.⁴
  2. Two phone calls at initiation of treatment effectively lowered anxiety among patients undergoing radiation therapy.²
  3. A systematic review of studies of telehealth interventions in the oncology population revealed telehealth may be effective in evaluating and managing patients with pain, depression and quality of life issues when integrated into clinical practice. Further studies are needed.⁵
- One Level II Good Quality Quasi-Experimental Study:
  4. Clinical trial visits were managed and adverse events graded through telehealth videoconferencing for patients diagnosed with prostate cancer and administered Metformin for anti-cancer effects.⁵

SUMMARY

- The evidence revealed that telehealth is effective at decreasing adverse effects of cancer therapy in the general population of cancer patients.
- No evidence directly related to videoconferencing for Phase I clinical trial patients.
- These findings encourage original research to evaluate the effect of videoconferencing on prevention and management of side effects of treatment while on a Phase I clinical trial.

IMPLICATIONS FOR PRACTICE

- This study has the potential to decrease the need for unscheduled Protocol and ED visits.
- Increase patient adherence to study medication(s).

IMPLICATIONS FOR FUTURE RESEARCH

Conduct a study evaluating the effectiveness and impact of videoconferencing on symptom management in patients following their first dose of medication in Phase I oncology clinical trials.

PICO QUESTION

Compared to usual care, does a videoconference call with Phase I oncology clinical trial patients in an oncology research unit decrease the frequency and severity of side effects and toxicities?

REFERENCES

EVIDENCE BASED PRACTICE FOR
ROUTINE SUPRAPUBIC TUBE (SPT) CHANGES
BY NURSES IN HOSPITALIZED PATIENTS

Jill A. Taylor Pedro, DNP, RN, ACNS-BC, ONC; Erin Salisbury, MSN, RN;
Virginia Capasso, PhD, RN, ANP-BC, ACNS-BC, CWS
Massachusetts General Hospital, Boston, MA

BACKGROUND AND SIGNIFICANCE

• Practice Issue: A suprapubic tube or catheter is an indwelling catheter that is placed percutaneously in the lower abdomen to drain urine from the bladder. Once a SPT has been placed, routine changes should occur every four to six weeks to prevent complications such as infection, obstruction, leakage, or nonfunctioning. Frequently, when a patient with a SPT is hospitalized, the team caring for the patient does not feel comfortable changing the tube and there is a delay obtaining a urology consult to change the SPT in a timely manner. This study aimed to evaluate the literature for evidence to support Registered Nurses (RNs) changing suprapubic tubes in hospitalized patients.
• PICO Question: Among patients with chronic suprapubic tubes (P), are the rates of complications (O) similar when interval changes of the SPT are performed by nurses (I) as compared to physicians (C)?

METHODS

• The literature was reviewed and evaluated for evidence level and quality utilizing the Johns Hopkins Nursing Evidence-Based Practice model
• External Evidence search:
  – OVID
  – CINAHL
  – PubMed
• Internal Evidence Search:
  – Ellucid

SUMMARY OF EVIDENCE

15 Citations
8 Excluded
4 Eligible
Level of Evidence
Level II (2)
Level III (2)
Quality of Evidence
Good
Good
Fair
Fair

SYNTHESIS

• Although the literature was limited, the four articles that were included (two-Level II studies and two-Level III studies) supported translation into practice.
• The literature showcased nurses implementing this practice successfully with no increased risk of complications to the patient.

REFERENCES
**PRACTICE ISSUE**

- Pediatric patients 0-24 months with viral bronchiolitis frequently require ventilation assistance.
- Non-invasive ventilation (NIV) options include high flow nasal cannula, Continuous Positive Airway Pressure (CPAP), and Bi-level Positive Airway Pressure (BiPAP).
- Patients on NIV are often NPO (nothing by mouth) and experience agitation.
- This may lead to worsening respiratory status which may increase need for respiratory support and length of stay.
- This prompted nurses in the Pediatric Advanced Care setting to question feeding practices for patients on NIV including the benefits, the criteria for initiation, and the effects on patient outcomes.

**METHODS**

- A literature search, limited to peer reviewed English language studies (1999-2019), was conducted using CINAHL, OVID Nursing, and OVID Medline. The Johns Hopkins Nursing Evidence-Based Practice model was utilized.
- In analyzing the evidence for fit, feasibility and appropriateness of potential recommendations the following were included:
  - Type of respiratory support
  - Mechanism of feeding
  - Limitations
  - Sample size
  - Evidence level
  - Quality and limitations were considered

**RESULTS**

- 24 studies were identified in the search for evidence.
- 2 of 24 references were eligible for inclusion:
  - 2 Level III studies
- The overall evaluation of the evidence was good quality (consistent results, adequate sample size, some control, definitive conclusions, recommendations based on literature review)
- Both references involved high flow nasal cannula. There were no articles involving CPAP or BiPAP.
- The first article reported no difference in adverse events between orally fed and tube fed patients. The second showed low rates of aspiration and good tolerance of oral nutrition among patients aged 1-24 months receiving high flow nasal cannula for viral bronchiolitis.

**PICO QUESTION**

Do pediatric patients (age 0-24 months) who require non-invasive ventilation for viral bronchiolitis have better outcomes (less sedation, lower pain scores, shorter length of PICU stay) when receiving feedings than remaining NPO?

**REFERENCES**

BACKGROUND AND SIGNIFICANCE

• Radiation dermatitis is common and often treated with topical therapy.
• Patients are typically advised to avoid topical agents for several hours before daily radiation treatment out of concern that topical agents might increase the radiation dose to the skin.
• Restrictions of type of application of topical agents to radiation treatment field were instituted in the 1970’s without scientific evidence.
• These restrictions increase patients’ risk of skin breakdown, discomfort, and infection and is a source of anxiety for patients.

METHOD

- John Hopkins Nursing Evidence Based Practice Model

RESULTS

<table>
<thead>
<tr>
<th>Authors</th>
<th>Study Type</th>
<th>Products Tested</th>
<th>Test Device</th>
<th>Results</th>
<th>John Hopkins Nursing EBP Research Evidence Appraisal Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010*</td>
<td>Bleck, &amp; Phillips</td>
<td>Lit. Review</td>
<td>15 creams Normal application thickness</td>
<td>Ø ↑ surface dose or bolus effect</td>
<td>Level V Rating B</td>
</tr>
<tr>
<td>2014</td>
<td>Morely et al.</td>
<td>Quantitative Pre-clinical</td>
<td>Water-based cream &amp; silicon-based cream</td>
<td>Thickness &gt; 0.7 mm &amp; 1.5 mm to ↑ surface dose</td>
<td>Level 1 Rating B</td>
</tr>
<tr>
<td>2015</td>
<td>Fackrell et al.</td>
<td>Quantitative Pre-clinical</td>
<td>Silver Sulfadiazine &amp; Zinc Oxide</td>
<td>Ø sig. surface dose effect except thick 3mm layer Zinc Oxide</td>
<td>Level 1 Rating A/B</td>
</tr>
<tr>
<td>2017</td>
<td>Wooding et al.</td>
<td>Quantitative Clinical (n=33) New Zealand/China</td>
<td>Mepitel silicone dressing cp. Sorbolene cream or Biafine</td>
<td>Mepitel: 29% ↓ skin toxicity Ø sig. ↑ Dose to skin</td>
<td>Level 1 Rating B</td>
</tr>
<tr>
<td>2018</td>
<td>Baumann et al.</td>
<td>Quantitative Pre-clinical</td>
<td>Metallic &amp; non-metallic creams</td>
<td>1. Ø difference skin dose w/out 1.2 mm layer cream</td>
<td>Level 1 Rating A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Two Arm: phantom (1) &amp; animal (2)</td>
<td>2. Ø difference in tissue change on TUNEL assay</td>
<td></td>
</tr>
</tbody>
</table>

*Literature review was on studies done in 1997 (Burke, & Parker) and (Meegan, & Haycocks).

PICO QUESTION

In adult patients undergoing radiation treatments (P), do topical agents on skin during dose delivery (I) compared to no topical agents (C) affect progression of skin reaction (O)?

IMPLICATIONS FOR NURSING PRACTICE

• Review findings with radiation oncology collaboratives.
• Develop policies/procedures for approval.
• Conduct QI project to evaluate patient experience/outcomes.
ORIGINAL RESEARCH POSTERS
BACKGROUND

- U.S. population is 61.3% Caucasian and the nursing workforce is 78.5% Caucasian. (National Council of State Boards of Nursing, 2013, U.S. Census, 2014)
- African American nurses represent only 9% of the nursing workforce. (McMorran, 2015)
- Research demonstrated that a diverse workforce which reflects population demographics will improve healthcare quality & reduce health disparities. (Cohen, Gable, & Terril, 2002; Johann & Garey, 2014; Phillips & Malone, 2014)
- Well-educated and confident practitioners from diverse backgrounds are essential to high quality patient care.
- Development of collaborative academic-service programs between healthcare institutions and schools of nursing can facilitate the transition and retention of minority nurses into clinical practice.

PURPOSE

When one experiences a sense of personal involvement in an environment, seeing themselves as integral to it, they are experiencing belonging. A sense of belonging is vital to workplace commitment and success.

"...belonging means that your well-being is considered and your ability to help design and give meaning to its structure and institutions is realized." — John A Powell, www.whitehouserennovation.org

The study was conducted to examine sense of belonging amongCLCDN participants. The question addressed was: Are there differences in CLCDN participants’ descriptions of ‘sense of belonging’ within the context of the CLCDN program and in their practice environments?

METHODS

- Qualitative descriptive design
- 7 focus groups held. Each focus group lasted 90 minutes
- Used a semi-structured interview guide
- Demographic data were collected
- Focus groups were audio-recorded and field notes were kept
- Thematic qualitative content analysis was used to understand the participants’ perspectives
- Additional comparative analysis was completed using the NVivo 12 program and findings were cross-referenced for thematic validity

RESULTS

Three themes emerged from the data:
- Identification of belonging within the CLCDN program
- Challenges to a sense of belonging within the practice environment
- Shared sense of belonging experienced with patients

RESULTS – THEMES

Theme 1: Identification of belonging within the CLCDN program

This theme illustrates how the CLCDN program provided an environment that facilitated a sense of belonging, peer acceptance, and inclusion by the participants and addressed how they relied on that association when facing challenges.

Quotes:
- "With the CLCDN, I feel like I belonged somewhere...there's somebody there who could say OK, you can go forward, you can move forward, and you can push it, and you can be the patient you want to become through this program."
- "I felt supported not only by the CLCDN staff...but I feel like I developed a brotherhood or sisterhood while I was in the group. We had a very strong support system within each other, we studied together, we cried, we laughed. It was just the support that we...had...it was great."

Theme 2: Challenges to a sense of belonging within the practice environment

This theme represented participants' experiences of not feeling seen or having their voices heard, of being held to a higher standard, and having to work harder to achieve the same goals as their Caucasian counterparts. It reflected experiences counter to the theoretical framework of belonging which embraces authentic engagement and participation.

Quotes:
- "As a nurse on...sometimes people ask me question[s]. Most of the time people identify me with the home health aide...you would not believe how many doctors would come and see me with a patient and just look at me and go like 'I'm not sure what's going on with this patient.'"
- "You have to practice 120% in this place to survive. As you can see, I'm the only black nurse here. And I'm scrutinized more than everyone."
- "Oh my God, how could she do this, how could she do that, and when you hear all this coming back to you, how do they think I can't be good enough?"

Theme 3: Shared sense of belonging experienced with patients

This theme describes the shared connection that the participants had with patients which could be a sense of racial, ethnic, cultural and/or linguistic identity which represented a sense of shared experiences that linked the participants to patients.

Quotes:
- "I have to say, probably I don't know if it's our struggle, our culture. But it make us make more open to some issues that some patients have in their life."
- "I would go in...and the patient would say, oh, thank God, you're here. And the whole day, all the 12 hours just turn around. I would just mean the patient, like it's OK, you're in a great place..."
- "I remember literally one time a patient on the telephone to me, I've never to have a nurse who's not like everyone else on the unit..."

LIMITATIONS AND CONCLUSIONS

Limitations

Although the study’s qualitative design will not support broad generalization, methodological triangulation achieved through simultaneous personal/first-hand and NVIVO analyses supports the integrity of findings and demonstrates their stability.

Conclusion

Creating and enhancing diversity and inclusion to further a sense of belonging among members of the nursing workforce is a potential outcome of partnerships like the CLCDN

REFERENCES:


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This research was supported by an American Nurses Foundation–Syre Memorial Award and Mary Elizabeth Carnegie, DPA, MA, RN, FAAN Grant
INFORMED CONSENT FOR CORONARY ANGIOGRAPHY AND POSSIBLE PERCUTANEOUS CORONARY INTERVENTION: PATIENT PERSPECTIVE WHEN CONSIDERING A DIFFERENT INTERVENTION

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1Massachusetts General Hospital, Boston, MA, USA, 2Simmons University, Boston, MA, USA 3University of Huddersfield/Calderdale & Huddersfield NHS Foundation Trust, UK

BACKGROUND/SIGNIFICANCE

• Informed consent for coronary angiography (CORS) with the possibility of percutaneous coronary intervention (PCI) is complex.
• There are patients found to have coronary artery disease (CAD) that do not go onto same-setting PCI after CORS.
• Results from CORS sometimes requires consideration of other CAD treatment options.
• There is little information on the patient experience of being consented for CORS with the possibility of PCI, finding CAD, but not having PCI.

PURPOSE

To describe the patient perspective of informed consent for CORS +/- PCI, while having to consider other treatment options for their CAD.

METHODS

A survey developed by Astin, et al. (2020) was administered to a convenience sample of CAD patients who had CORS +/- PCI but did not proceed to PCI.

The survey assessed participants’ views about informed consent, the purpose of informed consent, attitudes towards informed consent, and views about discussing treatment, risk, benefits and perceived outcomes.

The survey items used a five-point Likert scale, indicating the participants’ level of agreement with 22 statements.

Of the 76 eligible patients approached, 70 enrolled, and 62 participants completed the survey.

SAMPLE

<table>
<thead>
<tr>
<th>SAMPLE DEMOGRAPHICS</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>45 (73)</td>
</tr>
<tr>
<td>Female</td>
<td>17 (27)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>High School or less</td>
<td>20 (32)</td>
</tr>
<tr>
<td>Completed or some college</td>
<td>19 (31)</td>
</tr>
<tr>
<td>Advance Degree</td>
<td>23 (37)</td>
</tr>
<tr>
<td>Age</td>
<td>68.4 +/- 11.4 years</td>
</tr>
<tr>
<td>Current Employment</td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>4 (7)</td>
</tr>
<tr>
<td>Working</td>
<td>25 (40)</td>
</tr>
<tr>
<td>Retired</td>
<td>33 (53)</td>
</tr>
</tbody>
</table>

NUMBER OF PARTICIPANTS BY DECADE OF LIFE

<table>
<thead>
<tr>
<th>DECADE OF LIFE</th>
<th>NUMBER OF PARTICIPANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-39</td>
<td>1</td>
</tr>
<tr>
<td>40-49</td>
<td>4</td>
</tr>
<tr>
<td>50-59</td>
<td>8</td>
</tr>
<tr>
<td>60-69</td>
<td>15</td>
</tr>
<tr>
<td>70-79</td>
<td>26</td>
</tr>
<tr>
<td>80-89</td>
<td>6</td>
</tr>
</tbody>
</table>

LIMITATIONS OF THIS STUDY

• This study enrolled patients who had diagnostic angiography but did not receive a same-setting PCI and did not exclude patients who had previous experience with diagnostic angiography.
• Participants were required to be English speaking, were from a single hospital, approached after being told but before receiving their alternative treatment.

RESULTS

• Ninety-two percent (n=55) wanted consent to include information about all possible risks of PCI.
• Ninety-five percent (n=56) felt that clinicians should explain “Additional procedures that are likely to be necessary.”
• A majority (97%) of participants (n=57) felt clinicians should explain what alternative/other treatment options are available.

GENDER DIFFERENCES

• More women reported information about risks led to more worry (3.0 vs 3.9, t=−2.26, p<.03), information about alternatives was confusing (2.6 vs 3.5, t=−2.35, p<.025), and they had difficulty remembering all information during consent (2.0 vs 2.6, t = −2.19, p<.03).

CONCLUSIONS

• Participants want consent for CORS +/- PCI to include information on risk associated with and alternate treatment options beyond same-setting PCI.
• Women reported the information difficult to remember and experienced more worry and confusion as compared to men.

IMPLICATIONS FOR PRACTICE AND/OR FUTURE RESEARCH

• This study highlights targets for nursing interventions to improve the informed consent process for patients who are consented for coronary angiography, who may not receive any intervention or PCI, but one of the other routine options, such as medication change, later PCI, or coronary artery by-pass grafting.
• A qualitative study of the patient experience may increase participation and provide greater depth of understanding.

DECLARATION OF INTEREST

THE AUTHORS HAVE NO CONFLICT OF INTEREST TO DECLARE.
NUDGING DISCHARGE READINESS WITH A POSTER: A SEQUENTIAL, EXPLORATORY MIXED METHODS PILOT STUDY OF CAREGIVERS

Jennifer Cahill PhD, RN; Laura L. Leets, PhD; Amber Sprenger, PhD; Juli Simon Thomas, PhD; Rob Hartman, PhD; Mary Poyner Reed, PhD, RN, CNRN, ANP, NEA-BC; Chrissy T. Vu, PhD; Nicholas Kohn, PhD; Sanith Wijesinghe, PhD; Sybil Klaus, MD
Massachusetts General Hospital, Boston, MA

RESULTS

Significant effects for poster condition were found on caregivers' perceived readiness for discharge, \( F(1, 125) = 7.75, p = 0.006, \text{Cohen's d} = 0.44 \) and preparedness for the transition home, \( F(1, 121) = 7.24, p = 0.008, \text{Cohen's d} = 0.44 \). Only a marginal effect was found for poster condition on caregivers' confidence ratings, \( F(1, 125) = 2.93, p = 0.090, \text{Cohen's d} = 0.29 \).

CONCLUSIONS

Results suggest simple nudges in clinical settings may yield measurable improvements in caregiver outcomes during complex processes such as discharge.

IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH

Using rigorous experimental design, this study both demonstrated that and illustrated how ‘nudges’ might be applied in dynamic clinical environments at reasonable scale and with low-risk or administrative burden.

BACKGROUND/SIGNIFICANCE

Many urban hospitals face a common challenge: limited space for a high number of patients. This conflict leads to high patient throughput, including complex and accelerated hospital discharges, which can impact patient perception of discharge readiness.

PURPOSE

This study examined whether a poster that highlighted parental tasks and decisions around discharge improved perception of their child’s readiness for discharge.

METHODS

Sequential, exploratory mixed methods design and nudge theory framework were used in 2 connected studies. Study 1 used focus groups to explore clinician perspectives on existing discharge processes.

Content analysis informed a poster intervention (Figure 1) devised to “nudge” caregivers towards readiness and self-efficacy that was then proof-of-principle tested in a randomized, controlled experiment (Study 2). The poster focused practical knowledge for specific areas of transition adjustment, such as medication issues, education, and effective communication skills around recovery behaviors, barriers, and enablers.

Caregivers (n=135) on 3 clinical units (Table 1) completed outcome measures at discharge. ANCOVA was used to test the effect of poster condition (poster vs. no poster) on caregiver readiness, preparedness, and confidence while controlling for previous admissions.

![Figure 1: Poster Nudge](image)

### Table 1: Participating Clinical Units

<table>
<thead>
<tr>
<th>Unit (Description)</th>
<th>No. of beds (# single beds)*</th>
<th>Admissions</th>
<th>Median length of stay days (inrange)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stem Cell Transplant</td>
<td>14 (14)</td>
<td>233</td>
<td>7 (31)</td>
</tr>
<tr>
<td>Hematology/Oncology</td>
<td>30 (30)</td>
<td>1,080</td>
<td>5 (6)</td>
</tr>
<tr>
<td>Neuroscience</td>
<td>31 (19)</td>
<td>2,332</td>
<td>3 (3)</td>
</tr>
</tbody>
</table>

*Maximum occupancy across all units = 2 patient beds per room

*Although we did not collect demographic or medical history data for the current sample, clinical staff have confirmed that unit descriptions are broadly representative of the “typical” patients admitted, and no specific steps were taken to over- or under-sample a specific patient sub-population. Caregivers of patients receiving end-of-life support and caregivers who did not speak or read English were excluded from the study.
A DOUBLE-BLIND, PROSPECTIVE, MATCHED-PAIR TRIAL
COMPARING DISCARDED BLOOD ALIQUOT WITH STANDARD APPROACH
FOR THE DIAGNOSIS OF BACTEREMIA IN PEDIATRIC PATIENTS
WITH A CENTRAL VENOUS CATHETER (CVC);
PRELIMINARY ANALYSIS OF SENSITIVITY AND SPECIFICITY

Jennifer Cahill, PhD, RN; Marissa Navarino BSN, RN, CPHON; Haylee Manning, BS
Massachusetts General Hospital, Boston, MA

BACKGROUND AND SIGNIFICANCE

Blood cultures are common diagnostic tests. The current standard at a large pediatric hospital is to draw an initial 3mL blood aliquot to discard before obtaining the principal sample from a CVC to inoculate culture bottles. Sensitivity of the existing standard is estimated at 65.0-75.7%. Recently, limited studies have questioned whether discarding the initial aliquot of blood is necessary to increase sensitivity of the culture.

METHODS

3mL waste samples were obtained at the time of clinical culture using standard aseptic technique and inoculated into a BD BACTEC Ped Plus aerobic culture bottle (research culture). A 3mL clinical sample was then obtained following the same standard protocol. Blood cultures were processed using the BACTEC® 9240 instrument (Becton Dickinson, Microbiology Systems) following routine lab protocols. Positive cultures were subcultured on agarose plates and incubated for identification to the species level (MALDI-TOF; Buker). Sensitivity and specificity of the research cultures versus the gold standard clinical culture were calculated using pre-specified classification criteria.

RESULTS

In 592 samples analyzed, bacteremia prevalence was 3.38% (95% CI 2.08% to 5.17%). The research sample identified 567 true negatives, 6 false negatives, 14 true positives, and 5 false positives, yielding a research culture sensitivity of 70.00% (95% CI: 45.72% to 88.11%); specificity of 99% (97.97% to 99.72%); PPV 73.68% (52.77% to 87.53%) and NPV 98.95% (97.97% to 99.46%).

CONCLUSIONS

Results indicate that culture of the waste sample yielded sensitivity within published ranges for lower volume (<20mL) cultures.

IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH

Preliminary results suggest there may be little value in drawing a waste aliquot prior to the principal sample for blood culture.
THE PARENTAL EXPERIENCE OF HAVING A HYPOGLOSSAL NERVE STIMULATOR IMPLANTATION IN THEIR ADOLESCENT WITH DOWN SYNDROME AND SLEEP APNEA

Annette McDonough, PhD, RN,* Kevin Callans, BSN, RN,1,2
David Manley,3 Diane L. Carroll, PhD, RN, FAAN1
1Massachusetts General Hospital, 2Massachusetts Eye and Ear, and 3University of Massachusetts, Lowell, *Deceased

BACKGROUND
Obstructive sleep apnea (OSA) is present in 30-80% of Down Syndrome (DS) children, resulting in morbidity and poor quality of life. Lack of treatment for OSA can result in cardiovascular problems, learning disabilities, behavioral problems, excessive daytime sleepiness and increased morbidity. DS children with persistent OSA require continuous positive airway pressure, and potentially tracheostomy as a last option to reduce apnea episodes.

A clinical trial has been undertaken to insert a hypoglossal nerve stimulator (HNS) in adolescence with DS and OSA to assess safety and efficacy on sleep (ClinicalTrials.gov: NCT2344108). The HNS is an implanted device that generates electrical impulses to stimulate the protrusion of the tongue, which is timed to inspiration. The device consists of a stimulation lead, neuro stimulator and a sensing lead.

PURPOSE
Our interest is in the parental experience of agreeing to have an HNS implanted in their adolescent with DS and OSA.

RESULTS
Fifteen parents (13 mothers/2 fathers) participated. Their adolescents who had an HNS, were a mean age of 15.7 years. There were 8 males and 6 females. Three themes were identified.

Theme one
Family running out of options for OSA treatment
With continuing and escalating problems with sleep disturbances in their adolescent, parents expressed increasing distress and physicians responded by ordering more sophisticated testing. For some parents, this was their first exposure to actual concrete data to identify the severity of their adolescent’s sleep issues and then the dangers of sleep apnea. One parent found from the sleep study that their child was having 45 episodes of sleep apnea per hour!

Observed regression in cognitive development and behavior.
– ‘My child was experiencing regression in behaviors that she, I mean, she had cognitive language delays that were actually regressions from where she had been in a year or 2 before’
– ‘We had gotten to the point where our son wasn’t sleeping past 2 in the morning, so we needed to do something’
Parents actively searched for less invasive options.
– ‘I would do anything to get this trach out at the time, because it was, like 11 years, dealing with the trach.’
– ‘we tried the CPAP machine with her, four times without success.’

Theme two
Trust in the HNS multidisciplinary team
Parents cited trust in the team as a key driver of their decision for HNS implantation. Visits with the research team allowed the parents access to the experts to answer all their questions. HNS seemed to parents a less invasive, better alternative treatment option and parents had faith in the team.

Theme three
‘Life changing’ outcomes
After the HNS insertion and the period of adjustment of the device stimulation, parents started to log in the changes that they were seeing in their adolescent. These changes included not only altered sleep patterns in their adolescent, but also changes speech and behavior. These identified areas targeted the investigators to more objective outcomes by other specialists.

Observed regression in cognitive development and behavior.
– ‘She was talking for 10 minutes. And you know, prior to surgery she used only two to three words’
– ‘Even the tone-the muscles in his face are improving’
– ‘We decreased his ADHD medication by 50%’
– ‘You know, doing so much better academically. I just get reports from school; she does her work, a lot’
– ‘I think in terms of attention and ability to, to power through and do schoolwork and things like that really where we see the biggest change’
– ‘He’s able to go swimming’
– ‘Yep, he’s happier, when we walk in his room he smiles and gives us a hug and he’s much quicker to do what we ask him to do and happier to do what we ask him to do’

CONCLUSIONS
Parents described being at a breaking point and were willing to consider this novel treatment. They relied on their trust in the HNS team. Future research is needed to validate the improvements not only in sleep, but also in behavior and speech as additional potential benefits of the HNS.

The power of parents to advocate for their adolescent and to share their experience are a testimony to them. The HNS parents now have their own social media site and they have worked to develop videos that are on the MFGHC YouTube site.
DECREASING CATHETER DAYS THROUGH NURSING HANDOFF, STAFF EDUCATION, AND THE NURSE DRIVEN PROTOCOL FOR CATHETER REMOVAL
Lisa Rattner, RN, BA, BS; Lisa Chandler, RN, BSN; Susan Evangelista, RN, BSN; Susan Diehl, RN, BSN; Kristen Antony, RN, BS, BA; Anne Chamberlin, RN, BSN; Lisa Finnegan, RN, BSN; Jen Cervantes, RN, BSN; Janiye Baird, RN, BSN; Theresa Capodilupo, RN, MSN; Joseph Locascio, PhD; Virginia Capasso, PhD, CNP, ACNS, CNS Massachusetts General Hospital, Boston, MA

BACKGROUND AND SIGNIFICANCE

Why did we do the study?
• Spike in Surgical/Trauma Unit CAUTI rate (0.0 to 5.08) between October 2015–December 2015
• 2 cases of CAUTI in Quarter 1 of Calendar Year 2016

Why does this matter?
• Increased morbidity, LOS, and health care costs
• Considered “largely preventable,” thus, a “never event”
• MGH standard of excellence – “Excellence Everyday”

Strategies to reduce CAUTI rate?
• Nurse education – catheter care (Oman et al., 2012; Thomas, 2016)
• Nurse Driven Protocol (NDP) (Mor, 2014; Thomas, 2016)
• Focused rounding (Thomas, 2016) and auditing (Wald and Kramer, 2011)
• UC dwell time is the single most important risk factor for CAUTI with the risk of infection increasing at a rate of 5% per catheter day beyond the first 48 hours of catheterization (Wald and Kramer, 2011)

METHODS

Design: Quasi-experimental study
Sample: Two cohorts of patients
• Historical Controls (HC) admitted before three-intervention bundle (4/2017–11/2017)
• Prospective Patients (PP) admitted after implementation of three-intervention bundle (12/2018–5/2019)

Inclusion criteria:
• Admitted immediately after surgery to 27-bed surgical/trauma unit with a UC

Exclusion criteria:
• As delineated in Nurse Driven Protocol (NDP)
• Patient admitted to the surgical/trauma unit without a UC

Sample size: Based on power analysis for logistic regression analysis, small effect size (.25), power of .8, and alpha of .05, required statistical significance

PROCEDURE

Best Practices and “Smart Text” Documentation in EPIC
1. Insertion date
2. Catheter day
3. Eligible for Nurse Driven Protocol (NDP)
4. Discussion with provider re: removal of UC
5. Anticipated removal day
6. Best Practice Catheter Care:
   • Bag maintained below bladder
   • Closed system maintained
   • Peri-care/UC care performed
   • Device secured in place

DATA ANALYSIS


AIMS OF STUDY

1. Reduce urinary catheter (UC) dwell time and the incidence of CAUTI on White
2. Promote innovative uses of eCare to guide nurse-nurse shift handoff communication and documentation.
3. Increase clinical nurses’ knowledge of current EBP/best practice catheter care via an educational campaign.
4. Empower staff RNs to participate in care decisions by encouraging the use of and implementing the NDP

RESULTS

HIGH FREQUENCY ADMITTING DIAGNOSES (N=172)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total (N=172)</th>
<th>HC (N=87)</th>
<th>PP (N=85)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pancreatic Cancer</td>
<td>31</td>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>Colorectal Cancer</td>
<td>30</td>
<td>13</td>
<td>17</td>
</tr>
<tr>
<td>Diverticulitis</td>
<td>24</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>Pancreatic Mass</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

HIGH FREQUENCY SURGICAL PROCEDURES

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Total (N=172)</th>
<th>HC (N=87)</th>
<th>PP (N=85)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal Abdominal (Bladder, hernia repair, cholecystectomy)</td>
<td>27</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>Moderate Abdominal (e.g., LAR, omentectomy)</td>
<td>45</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>Major Abdominal (e.g., open, laparotomy, hysterectomy)</td>
<td>31</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>Other (Mastectomy, Excision)</td>
<td>9</td>
<td>2</td>
<td>7</td>
</tr>
</tbody>
</table>

IMPLICATIONS FOR PRACTICE

• Embed Best Practices in EPIC Flowsheet
• Encourage UC discontinuance, bladder scanning, and standard catheterization, PRN
• Encourage TAP blocks for analgesia to avoid urinary retention and prolonged UC dwell time

CONCLUSIONS

• Nursing vigilance about interventions to prevent CAUTI reduced the CAUTI incidence on the surgical unit after the spike in 2015–2016 and throughout the study period.
• The single case of CAUTI in this study reflects reported trends in CAUTI when UC dwell time > 48 hours.

REFERENCES:


This study was funded by an Yvonne L. Munn Nursing Research Award, May 2017.
HEALTH EQUITY IN INCOME DISPARATE WOMEN: MAKINGS OF A MIDLIFE CRISIS

Kirsten A. Dickins, PhD, AM, MSN, FNP-C, Sara E. Dolan Looby, PhD, ANP-BC, FAAN
Yvonne L. Munn Center for Nursing Research
Massachusetts General Hospital, Boston, MA

BACKGROUND AND SIGNIFICANCE

• The association between poverty and poor health is well-established, though less is known of this relationship in midlife women.
• Midlife is characterized by increased disease risk, and engaging midlife women in preventive care is a CDC-endorsed risk reduction strategy, often influenced by behavioral and mental health characteristics.

PURPOSE

To compare differences in modifiable behavioral and mental health characteristics in midlife women, delineated by income disparity.

METHODS

• Design & Sample: Secondary analysis in 33 women enrolled in a prior menopause study. Women were classified by income disparity based on public health insurance use (MassHealth enrollment; eligibility determined by income).
• Eligibility: age 45-52, perimenopausal;
• Ineligibility: using hormone therapy, pregnant/breast feeding (past year), active cancer or diabetes.
• Outcomes: demographic characteristics; behavioral characteristics: current cigarette smoking, substance use history, current exercise, obesity (BMI ≥ 30); mood symptoms and sleep: depressed mood (Center for Epidemiologic Studies Depression Scale [CES-D]), anxiety (Generalized Anxiety Disorder-7, [GAD-7]), and sleep (Insomnia Severity Index [ISI]).
• Analysis: All variables were tested for normality prior to analysis. Groups comparisons were evaluated via Student’s t-tests, Wilcoxon Rank-Sum tests, or Chi-square tests.

RESULTS

Demographic Characteristics (Table 1):

Groups were similar in age, race, ethnicity, education, and marital status (p>0.05); 42% (14) were enrolled in MassHealth.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Income Disparate (n=14)</th>
<th>Non-Income Disparate (n=19)</th>
<th>Total (N=33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (mean) (SD)</td>
<td>47.9 (2.3)</td>
<td>47.6 (1.7)</td>
<td>47.7 (1.9)</td>
</tr>
<tr>
<td>Race (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black/African American</td>
<td>(7) 50%</td>
<td>(8) 42%</td>
<td>(15) 45%</td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>(5) 36%</td>
<td>(11) 58%</td>
<td>(16) 49%</td>
</tr>
<tr>
<td>American Indian</td>
<td>(1) 7%</td>
<td>(0) 0%</td>
<td>(1) 3%</td>
</tr>
<tr>
<td>More Than One Race</td>
<td>(1) 7%</td>
<td>(0) 0%</td>
<td>(1) 3%</td>
</tr>
<tr>
<td>Ethnicity (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>(1) 7%</td>
<td>(3) 16%</td>
<td>(4) 12%</td>
</tr>
<tr>
<td>Completed High School/GED (%)</td>
<td>(14) 100%</td>
<td>(19) 100%</td>
<td>(33) 100%</td>
</tr>
<tr>
<td>Currently Employed (yes) (%)</td>
<td>(1) 7%</td>
<td>(15) 79%</td>
<td>(16) 48%</td>
</tr>
<tr>
<td>Currently Married (yes) (%)</td>
<td>(2) 15%</td>
<td>(7) 37%</td>
<td>(9) 28%</td>
</tr>
<tr>
<td>Children (yes) (%)</td>
<td>(13) 93%</td>
<td>(10) 53%</td>
<td>(23) 70%</td>
</tr>
</tbody>
</table>

*Significant differences (p<0.01) observed between the two groups for these variables; more income disparate women had children, while less were employed. No significant between-group differences were observed for the other variables.

Behavioral Health Characteristics (Figure 1):

More income disparate women reported current cigarette smoking (71% [10] vs. 21% [4], p=0.004), and substance use history (79% [11] vs. 5% [1], p<0.0001). Fewer income disparate women reported current exercise (57% [8] vs. 89% [17], p=0.03); more were obese (BMI ≥ 30; 50% [7] vs. 11% [2], p=0.01).

Mood Symptoms and Sleep Characteristics (Figure 2):

Income disparate women reported significantly worse mood and sleep: CES-D scores [median (IQR)] (14 (12, 24) vs. 6 (0, 9), p<0.0001); GAD-7 scores (6 (2, 9) vs. 2 (0, 4), p=0.04); ISI scores [mean (SD)] (11 (5.5) vs. 5 (4.4), p=0.004).

CONCLUSIONS

Income disparate midlife women fare differently on engagement with health-promoting behaviors, and demonstrate worse mood symptoms and sleep, suggesting a lack of parity in preventative screening and healthy aging opportunities.

IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH

• Nurse-led interventions are needed to enhance care engagement among midlife income disparate women.
• Preventive health screenings, including behavioral and mental health characteristics at midlife, may reduce risk for disease and promote health equity early in the aging trajectory.

ACKNOWLEDGEMENTS:

• Connell Postdoctoral Fellowship in Nursing Research
• This research is supported by the National Institute of Nursing Research grant # 1K23NR011833-01A1 (PI: Looby), MGH IRB Protocol number: 2009P-001315.
POST-ACUTE OUTCOMES IN OLDER ADULTS WITH DEMENTIA

Jane Flanagan, PhD, RN, ANP-BC, AHN-BC, FNI, FNAP, FAAN\textsuperscript{1,2}, Marie Boltz, PhD, GNP-BC, FGSA, FAAN\textsuperscript{3}, and Ming Ji, PhD\textsuperscript{4}

\textsuperscript{1}Boston College William F. Connell School of Nursing, \textsuperscript{2}Massachusetts General Hospital, \textsuperscript{3}Penn State, \textsuperscript{4}University of Southern Florida

BACKGROUND

- Post-acute care, hospitalization-associated disability (HAD) prompts admissions to skilled nursing facilities (SNF) for Medicare-reimbursed rehabilitative care with the goal of returning the older adult to baseline function.
- Persons with dementia are at higher risk for HAD and 600 times more likely to be in a nursing home at six-months post-discharge.
- A better understanding of issues impacting the transition to SNF may inform the development of rehabilitation protocols that support individualized rehabilitation plans and services.

PURPOSE

To examine the intrinsic factors challenging the post-acute transition of older persons to a long-term, skilled nursing facility (SNF).

METHODS

Analysis of:
- Medicare Analysis Review (MED PAR)
- Minimum Data Set (MDS) claim data
- In 23,662 community-dwelling persons admitted to Massachusetts SNFs from acute care hospitals in 2013.

RESULTS

- Logistic regression modeling indicates that those who had worse admission function, vision loss, hearing loss, more severe cognitive impairment, delirium, depression, lower pain frequency, were of older age and had never been married were more likely to transition to long-term stay at the skilled nursing facility.
- The model had an overall significance (Likelihood Ratio Chi-Square = 1035.8 with 15 degree of freedom, \( p < 0.0001 \)) and an area under ROC curve of 0.69. The Hosmer and Lemeshow Goodness-of-Fit indicates the model fit is adequate (Chi-Square = 12.3, df = 8, \( p = 0.1398 \)).

PATIENT CHARACTERISTICS

<table>
<thead>
<tr>
<th>Variable</th>
<th>N (%) or Mean ± SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>82.4 ± 8.1</td>
</tr>
<tr>
<td>Female</td>
<td>15,691 (66.3)</td>
</tr>
<tr>
<td>White</td>
<td>21,980 (92.9)</td>
</tr>
<tr>
<td>Widowed</td>
<td>11,307 (47.8)</td>
</tr>
<tr>
<td>Vision loss</td>
<td>3,407 (14.0)</td>
</tr>
<tr>
<td>Hearing loss</td>
<td>5,283 (22.3)</td>
</tr>
<tr>
<td>Dementia</td>
<td>4,840 (20.1)</td>
</tr>
<tr>
<td>Delirium</td>
<td>513 (2.7)</td>
</tr>
<tr>
<td>Depression</td>
<td>6,857(29.0)</td>
</tr>
<tr>
<td>Pain presence</td>
<td>13,440 (60.7)</td>
</tr>
<tr>
<td>Pain almost daily or constantly</td>
<td>6,400 (27)</td>
</tr>
<tr>
<td>Severity of cognitive impairment</td>
<td>12.1 ± 3.8</td>
</tr>
</tbody>
</table>

DISCHARGE STATUS

<table>
<thead>
<tr>
<th>Discharge Status</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>F (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharge to Community</td>
<td>16,972</td>
<td>51.7</td>
<td>13.5</td>
<td>465.02 (&lt;.0001)</td>
</tr>
<tr>
<td>Discharge Due to Death</td>
<td>2,759</td>
<td>60.1</td>
<td>17.1</td>
<td></td>
</tr>
<tr>
<td>Discharge to Other Nursing Facilities</td>
<td>628</td>
<td>56.5</td>
<td>17.1</td>
<td></td>
</tr>
<tr>
<td>Did Not Discharge within First Quarter</td>
<td>3,322</td>
<td>59.5</td>
<td>17.1</td>
<td></td>
</tr>
</tbody>
</table>

LOGISTIC REGRESSION MODEL FOR REMAINING IN FACILITY

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>( x^2 )</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>144.5</td>
<td>5.9</td>
<td>602.3</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Age</td>
<td>0.1</td>
<td>0.0</td>
<td>88.4</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>White</td>
<td>1.5</td>
<td>0.4</td>
<td>16.9</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Widowed</td>
<td>1.7</td>
<td>0.4</td>
<td>37.0</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Vision loss</td>
<td>1.5</td>
<td>1.2</td>
<td>115.7</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Hearing loss</td>
<td>5.8</td>
<td>1.2</td>
<td>21.0</td>
<td>.0001</td>
</tr>
<tr>
<td>Dementia</td>
<td>2.3</td>
<td>0.4</td>
<td>31.3</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Pain almost daily or frequently</td>
<td>2.6</td>
<td>0.5</td>
<td>65.7</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Delirium</td>
<td>4.6</td>
<td>0.7</td>
<td>40.4</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Depressive symptoms</td>
<td>0.3</td>
<td>0.0</td>
<td>155.6</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>

B: unstandardized coefficient
SE=the standard error for \( \beta \)

CONCLUSIONS

- Our study added to work suggesting advanced age, dementia/cognitive impairment, depression, unmarried status and physical function results in long term care placement.
- We also identified other factors including delirium, vision loss and hearing loss, which are findings not found in other studies representing factors that may be modifiable with targeted interventions.

IMPLICATIONS

Findings indicate a need to:
- Assess and communicate multiple factors in addition to physical function across care settings from acute to rehabilitative care.
- Develop interventions to accommodate for delirium, vision and hearing loss.

ACKNOWLEDGEMENT:
This work was supported by the Donaghue Foundation’s Another Look Grant Mechanism.
PSYCHOLOGICAL OUTCOMES OF A PROVIDER DESIGNED INTERNET-STREAMED YOGA VIDEO IN BREAST CANCER SURVIVORS

Jane Flanagan, PhD, RN, ANP-BC, AHN-BC, FNAP, FNP, FAAN; Kathryn Post, PhD, ANP-BC; Rebecca Hill, PhD (c), DNP; Loren Winters, ANP-BC, OCN, RYT

1Boston College William F. Connell School of Nursing, 2Massachusetts General Hospital, 3MGH Institute of Health Professions

BACKGROUND

• In the U.S., there are more than 3.8 million breast cancer survivors.
• Breast cancer survivors often experience many physical and psychological symptoms related to treatment.
• Findings from studies exploring the experience of women with breast cancer and oral endocrine therapy suggest that patients seek interventions from their care providers that are aimed at reducing symptoms associated with treatment.
• Yoga is increasingly recommended to mitigate psychological distress and physical challenges post breast cancer diagnosis and treatment.
• Based on findings from previous work exploring the needs of breast cancer survivors, an interdisciplinary team of providers led by advanced practice nurses developed and delivered mindfulness-based Internet-streamed yoga video aimed at improving psychological outcomes in survivors using a gentle yoga practice tailored for breast cancer.

THE YOGA VIDEO

• The 20-minute video was developed by a multi-disciplinary team comprised of medical and surgical oncology nurse practitioners, a physical therapist, research nurse, and cancer center yoga instructor.
• Goal: to address symptoms related to treatment (surgery, radiation, chemotherapy, endocrine (hormone) therapy) for breast cancer.
• The postures incorporate movements/actions similar to exercises prescribed by surgical providers and/or physical therapists as postoperative standard of care.

RESULTS

• Thirty-five mostly Caucasian (91.4%) women (mean age = 56) participated.
• A one-group repeated measures analysis of variance indicated statistically significant changes occurred in all measures between week 0 and week 4:
  - Decreased GAD (t = -2.97, p = .004)
  - Improved WEMWBS (t = 2.52, p = .008)
  - Increased KPC (t = 2.99, p = .004)
• Qualitative findings suggest the overall experience of the video was positive and the women would recommend its use to others.

INSTRUMENT SCORES BY WEEK

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Week 0 Mean (n=42)</th>
<th>Week 0 SD</th>
<th>Week 2 Mean (n=37)</th>
<th>Week 2 SD</th>
<th>Week 4 Mean (n=35)</th>
<th>Week 4 SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generalized Anxiety Scale</td>
<td>8.24</td>
<td>5.03</td>
<td>6.35</td>
<td>4.06</td>
<td>5.17</td>
<td>3.22</td>
</tr>
<tr>
<td>Mental Well-Being Scale</td>
<td>26.31</td>
<td>5.01</td>
<td>27.65</td>
<td>4.24</td>
<td>28.69</td>
<td>4.09</td>
</tr>
<tr>
<td>Knowing Participation in Change Scale</td>
<td>64.47</td>
<td>9.3</td>
<td>67.59</td>
<td>8.04</td>
<td>70</td>
<td>9.13</td>
</tr>
</tbody>
</table>

QUALITATIVE FINDINGS

Self-report of most distressing symptoms
- Worry of recurrence: 9
- Tight surgical area: 8
- Medication side effects: 6
- Fatigue/weakness/decreased energy: 6
- Weight gain: 5
- Hair loss: 5
- Decreased concentration: 5
- Breast asymmetry: 3
- Breast pain: 3
- Back pain: 2
- Nerve pain: 2

Self-report of management of symptoms
- Complementary therapies: 26
- Lifestyle changes: 19
- Avoidance of symptoms: 6
- OTC meds/supplements: 5
- Doing nothing/no issues: 2

Did the video help with any symptoms?
- Yes: 25
- No: 8
- Unsure: 2

CONCLUSIONS

• Quantitative results indicate the yoga video did improve the psychological outcomes of anxiety, well-being and knowing participation in change.
• Qualitative findings suggest the video was helpful in terms of promoting relaxation.
• Most participants said they plan to continue to use the video and would recommend it to a friend.
• Limitations: One site, small, homogenous sample, white and educated.

IMPLICATIONS

• A randomized clinical control trial is needed to understand generalizability.
• More work is needed to understand how this video may improve psychological outcomes, physical symptoms and biomarkers of cortisol and inflammatory marker (IL-6 and IL-1β) production.
• The video may be considered as part of a toolkit to improve breast cancer survivor outcomes.

PURPOSE

This study aimed to test the psychological outcomes of a mindfulness-based Internet-streamed yoga video in breast cancer survivors.

METHODS

• A one-group purposive sample, repeated measure using a directed qualitative descriptive and mixed methods approach was used.
• Participants were recruited from breast oncology practices across two settings in the northeastern United States.
• Education about the video was provided and the link to the video was sent to participants.
• Demographic information, Knowing Participation in Change Short Form (KPCSFS), Short Warwick-Edinburgh Mental Well-being Scale (WEMWBS) and the Generalized Anxiety Distress Scale (GAD-7) were obtained at baseline, and again at two and four weeks.
• A semi-structured interview was conducted at four weeks.

ACKNOWLEDGEMENT:
This study was funded by the American Holistic Nurses Association.
We would like to acknowledge Erin Sullivan, ANP-BC, Cheryl Brunelle, PT, Emily Pepe, AGNP-BC and yoga instructor: Luba Zagachin
The number of people age 65 and older with dementia is estimated to reach 7.1 million in 2025. There are currently 15.7 million informal (unpaid, typically family) adult caregivers caring for people with dementia and these numbers are expected to double over the next three decades. Unpaid caregivers of persons with dementia have increased levels of stress, anxiety, depression and risk for poor health-related outcomes. Walking is widely supported as a cost-effective, accessible way to address these and other health issues.

**BACKGROUND AND SIGNIFICANCE**

- This 2-group pilot study used a quasi-experimental and qualitative descriptive design.
- Pre- and post-measures of general health (body mass index [BMI], blood pressure, heart rate, cognition, well-being, stress and perceived activity level) were obtained from caregivers at baseline and at 12 weeks in the HC and control groups.
- A directed qualitative descriptive approach was used to understand the overall experience.

**METHODS**

- Five male and 27 female caregivers (n=32) participated, μ age 57 years.
- Each group demonstrated a statistically significant increase in steps walked (p= .01 , .02).
- Although not significant, the intervention group did have an improvement in well-being (p= 0.08).
- Qualitatively, caregivers reported many stresses that made self-care challenging and highlighted social isolation.
- Caregivers also reported walking helped them gain a perspective on the need for self-care.
- Those in the HC group reported feeling supported and connected to others.

**RESULTS**

**CONCLUSION**

Both groups improved their daily steps. Although not statistically significant, the HC group had an improvement in well-being and qualitatively reported less isolation and more feelings of support and connectedness. Qualitative findings contributed to a greater understanding of the HC walking program and needs of informal caregivers.

**IMPLICATIONS**

Further work is needed to:
- Determine if this intervention is effective in a larger, more diverse population.
- Gain a greater understanding of caregivers’ perceptions of other strategies to address social isolation and stress.

**ACKNOWLEDGEMENTS**

- Research support for this investigation was provided by Aging Research Institute at Boston College.
- Thank you to:
  — Barbara Moscowitz, LISW for her support recruiting participants.
  — Ifeoma Obiora, MSN, AGNP-C and Brendah Ross, MSN, AGNP-C for their help in data collection and nurse coaching.
  — The caregivers who were willing to partner with us for this study.
Mothers, fathers or significant others who had a child in the NICU/Level II Nursery completed a voluntary survey within 72-hours of discharge. The survey evaluated parental facilitators/barriers for giving consent for their child.

Percentages were calculated for each answer. Responses to open-ended question are presented verbatim.

Methods

- Mothers, fathers or significant others who had a child in the NICU/Level II Nursery completed a voluntary survey within 72-hours of discharge.
- The survey evaluated parental facilitators/barriers for giving consent for their child.
- Percentages were calculated for each answer.
- Responses to open-ended question are presented verbatim.

Results

- Surveys were collected from June 2018-March 2019.
- 130 surveys were returned with a 93% response rate.
- Parents felt they were never told about studies 36.2%.
- Participation was done to help others learn more about research 42.3%.
- Parents wanted to engage with researchers 46.9%, healthcare providers 56.9% or other parents 46.9% to discuss studies.
- Parents also wanted information via videos 33.1%, websites 50% or flyers 28.5%.
- For long-term study engagement parents wanted updates via:
  - websites 71.5%
  - to talk with study staff 38.5%
  - to receive email reminders 51.5%
  - text messages 51.5%
- No major differences were noted between mothers and fathers.
- When evaluated by gestational-age (GA) it was noted that parents of lower GA infants needed more information to enroll children in studies 81.8% and wanted to find new health information about their child 23.5-40%.

Parents want to connect with study staff, providers and other parents who are involved in studies. Engaging with parents also supports longitudinal research. However, we need to do a better job promoting studies and providing up-to-date educational resources for parents to learn about research.

Implications for Nursing Practice and/or Future Research

Developing educational strategies to increase research visibility can assist parents understanding on how they can engage in research opportunities.
In December 2014, a patient in our Critical Care Unit was murdered by her husband, who then shot himself. The experience of employees working in a healthcare facility where a murder-suicide occurred, and best practices following such an event, are not known. Active shooter scenarios are anomalies in healthcare settings, often involving a personal relationship between perpetrator and victim, motivated by ill relatives, and ending in the suicide of the perpetrator (Kelen, 2012).

**AIMS OF THE STUDY**
- Describe the experience of working in a setting where a fatal shooting took place.
- Identify the essential needs of such individuals during and after the event.
- Identify any long or short term effects arising from the event.
- Identify and disseminate best practices regarding organizational response and support.

**RESEARCH QUESTION**
“What is the experience of individuals who were exposed to the fatal shooting that occurred in the Critical Care Unit?”

**METHODS**
The genesis of this study arose in the immediate post-event phase. Employees were understandably distressed about what happened. We were guided in study development by organizational leaders whose staff members were closest to the event. This phenomenological study was designed to describe this tragedy from the perspective of the healthcare workers who experienced it (Van Manen, 1990). Ten hospital employees, including staff nurses, leaders, and security officers, participated in multiple interviews.

**REFERENCES**

**THEMES**

**Shock, Disbelief to Anger**
- “…I thought, he must be reaching for his coffee. And that’s not what he was reaching for… I never expected there to be a gun.”
- “You know you go on an airplane and put the oxygen on yourself first… but to step away from your patient feels like abandonment.”
- “You’ve screwed up the lives of hundreds of other people that were involved…I hold him responsible for where he did it [it] and how he did it.”

**Ownership**
- “As a nurse, it’s my job to protect my patient… that’s my number one priority, and I didn’t do that for her.”
- “[Security said:] ‘We really thought… we were going to be gunned down…[I said:] ‘And you still did it.’ [He goes,] ‘Yes, because it’s our job to protect you.’”
- “Housekeepers came in and said, ‘No this is our unit, this is our room and we’re gonna clean it.’”

**Setting the Tone**
- “I remember [the nurse manager] coming in and heading towards the room and I just took her by the arms and I kinda turned her around and said don’t, don’t go look, don’t. You don’t need to see that and you don’t need it in your memory at home.”
- “[In the Command Center] someone said, ‘Well, we’re waiting for [the police] to come.’ And [the CEO]… said, ‘I don’t report to [the] police, I’m accountable to the staff and to the patients of this organization.’ … that was the time I was like, yeah, we’re going to pull through. Because it wasn’t ‘the bureaucracy,’ and ‘we can’t talk to the press,’… it’s not that he didn’t care, he knew where his priorities were.”

**New World**
- “The hardest part with healthcare is what is our job in healthcare? Compassionate? Consoling? We can fix it. We’ll make it better. [But] we can’t make everything better… we have the ability to know what our limitations are. But I don’t think everybody does. That’s the tough part.”
- “…the violence is on the rise… nurses get, like, calloused to it… [saying things to excuse patient behaviors like] ‘well I mean that was yesterday, she wasn’t in a good mood’ you understand like how you sound? That’s like… victims of domestic violence.”

**IMPLICATIONS**
- Important to the healing of affected individuals was a supportive organizational culture where leaders are present, authentic, and sensitive to their needs. Increasing violence in healthcare settings influences hospital employee’s perceptions of their safety and their roles, which can conflict.
- The well-being of hospital staff who experience violence requires a supportive organizational culture that must exist prior to such an event.
- What leaders say and do matters; setting the tone for organizational coping and caring is key.
- Violence in healthcare setting change healthcare workers’ perceptions of safety in and outside hospital walls.
- Our findings reinforce the concept that healthcare workers’ challenges are unique (Hartley, 2015; Scheurer, 2015; Inaba et al., 2018; Akiyama, 2020). Dueling responsibilities (caring for oneself, colleagues, patients, and families) were difficult to process during and after the shooting, leaving unresolved feelings behind.
GLOBAL AND DOMAIN-SPECIFIC COGNITIVE FUNCTION IN LIVER TRANSPLANT RECIPIENTS
Dami Ko, PhD, RN and Lisa Bratze, PhD, RN, ANP-BC, FAHA
Massachusetts General Hospital, Boston, MA

BACKGROUND AND SIGNIFICANCE
• The prevalence of cognitive impairment in the liver transplant population has been documented.1-4
• However, current research is largely limited to liver transplant recipients within early periods of transplant trajectory (e.g., less than 18 months).1-4
• Examining the cognitive trajectory beyond early periods of transplantation would inform the design of interventions to improve long-term health outcomes for liver transplant recipients.

PURPOSE
To enhance the understanding of cognitive function in liver transplant recipients, this study aimed to:
• Describe global and domain-specific cognitive function (e.g., memory and executive function) in recipients who survived more than six months after liver transplantation.
• Describe patient and clinical characteristics of recipients with impaired global and/or domain-specific cognitive function.

METHODS
• Secondary data analysis using cross-sectional data.5
• Population: Adult liver transplant recipients who survived more than 6 months post-transplant.
• Measures:
  – Cognitive function was measured by the Montreal Cognitive Assessment (MoCA). Four cognitive domains (Visuospatial/Executive functioning, Memory, Attention, and Language) were calculated based on the work of Vogel et al. (2015).6
  – Patient and clinical characteristics were assessed using a self-report patient information questionnaire.
• Data analysis: T-tests, Mann-Whitney tests, and Kruskal-Wallis tests.

RESULTS
• Participant characteristics (n=107):
  – Majority of the participants were male (n=64, 60.0%), married (n=72, 67.3%), white (n=102, 95.3%), and received a deceased donor liver transplant (n=90, 91.8%).
  – They had a mean age of 61.0 (SD=11.9) and a mean 14 years of education (SD=3.1), and the mean time elapsed since liver transplant was 7.6 years (SD=6.5, minimum-maximum: 0.5–28, median: 6, interquartile range: 10).

• Global cognitive function
  – Mean score: 24.5±3.0

• Domain-specific cognitive function

| Domain-specific cognitive function by patient and clinical characteristics |
|-----------------------------|------------------------|------------------------|------------------------|------------------------|
|                          | Global cognitive function | Visuospatial/Executive function | Memory | Attention | Language |
| Age (years)               |                        |                        |          |          |          |
| 18-40 (n=37)             | 25.3**                 | 3.9**                  | 9.9      | 7.3      | 4.0      |
| 41-64 (n=50)             | 25.2**                 | 3.9**                  | 9.2      | 7.4      | 4.3      |
| 65+ (n=10)               | 23.7**                 | 3.7**                  | 8.9      | 6.7      | 4.2      |
| Sex                       |                        |                        |          |          |          |
| Female (n=43)             | 25.0                   | 3.6                    | 9.6      | 7.2      | 4.1      |
| Male (n=64)              | 24.2                   | 3.8                    | 8.8      | 7.0      | 4.3      |
| Education (years)         |                        |                        |          |          |          |
| <12 (n=49)               | 24.2                   | 3.7                    | 8.8      | 6.7      | 4.0      |
| ≥12 (n=58)               | 24.8                   | 3.7                    | 9.3      | 7.4      | 4.4      |
| Years from LT            |                        |                        |          |          |          |
| <1 (n=12)                | 25.3                   | 4.0                    | 8.7      | 7.8      | 4.3      |
| 1-5 (n=35)               | 24.7                   | 3.8                    | 8.9      | 7.3      | 4.2      |
| 5-10 (n=24)              | 24.5                   | 3.6                    | 9.4      | 6.9      | 4.1      |
| ≥10 (n=30)               | 24.1                   | 3.6                    | 9.2      | 6.7      | 4.2      |
| Donor types              |                        |                        |          |          |          |
| Deceased (n=90)          | 24.4                   | 3.6                    | 9.0      | 7.1      | 4.2      |
| Living (n=10)            | 25.3                   | 4.4                    | 9.3      | 7.1      | 4.3      |

Bold: p < 0.05
a>b

CONCLUSIONS
Findings of this study provide preliminary support that many liver transplant recipients experience cognitive impairment regardless of their time since transplantation and that key characteristics may signal risk for cognitive impairment.

IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH
In nursing practice, regular examination of cognition for extended time points post-transplant should be prioritized. Future longitudinal studies should focus on developing strategies to address cognitive impairment in the population.

LIMITATIONS
As a secondary data analysis that used data from a single center, cross-sectional study.
• Generalizability of this study is limited.
• The findings regarding cognitive function do not indicate changes over time.
• The variables in this analysis were limited to the data as collected.

REFERENCE:
HEALTHCARE EXPERIENCE OF PEOPLE WHO INJECT DRUGS (PWID)
Kerry Nolte, PhD, FNP-BC, Jason Lucey, DNP, FNP-BC, Leah Hixon, MSN, FNP, Faith Farnham, SN, Mercedes McCoy, BSN, and Jessica Montemehroso, BSN
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BACKGROUND AND SIGNIFICANCE
Hospitalization for the sequela of injecting drugs presents a unique opportunity to engage People Who Inject Drugs (PWID). However, little is known about the healthcare experiences of PWID.

EXPERIENCES OF PWID WITH HOSPITALIZATION
People who inject drugs (PWID):
- Often face discrimination in inpatient setting (Maffina et al., 2013)
- More likely to leave against medical advice (AMA) and higher risk for worsening health (Biancarelli et al., 2019)
- Rarely feel safe, welcomed, or without stigma in hospital (St Marie, 2014)
- Avoid care due to fear over loss of control of prescribed opioids (St Marie, 2014)
- Face increased risk of overdose after discharge related to change in tolerance (Ravndal & Amundsen, 2010)

WHAT IS ALREADY KNOWN?

Risks of Negative Interactions
- Stigmatization and discrimination in healthcare (Henwood et al., 2014)
- Decreases engagement in care
- Decreases disclosure of health info and drug use
- Increases vulnerability to infections (HIV and HCV)
- Decreases connection with harm reduction services

Benefits of Positive Interactions
- Higher quality care is predicted by provider characteristics of positive affect, sympathy and concern (Skinner et al., 2007)
- PWID who establish effective rapport are more likely to:
  - Honestly disclose drug use
  - Adopt provider recommendations
  - Maintain continuity of care
  - Seek timely care (Salvaggio, McKim, Taylor, & Wild, 2013)
- Lower levels of substance use when substance misuse support was offered in hospital (Wakeman et al., 2017)

PURPOSE
We aimed to understand perception of healthcare experiences in PWID including elements of positive and negative rapport.

METHODS
- A qualitative descriptive and conventional content analysis approach was used
- Hospitalized individuals (n=17) experiencing a complication of injecting recruited from 4 NH hospitals
- Participants completed a survey and semi-structured interview
- Data collection March 201805–April 2019
- $10 Honorarium
- Analysis used a phenomenological approach
- Theme titles derived from in-vivo quotes
- Pseudonyms used to reference participants

RESULTS

17 total participants. Most (ages 22-58) injected heroin/fentanyl prior to hospitalization.
- Overall, participants reported they could disclose health info to providers but rarely felt supported.
- Some identified nurse champions who engaged them.
- Six Positive Interaction themes with reported benefits were identified (see graphic):
  1. Built Me Up
  2. Pushed for Me
  3. Had a Game Plan
  4. Actually Listened
  5. Gave Me a Chance
  6. Treated Me Like a Human

Five Negative Interaction themes with adverse consequences were identified (see graphic):
- 1. Just Another Junkie
- 2. Treated Less than a Human
- 3. Less Freedom Than Jail
- 4. Made Me Jump Through Hoops
- 5. Luck of the Draw

CONCLUSIONS
Positive interactions were reported to be associated with opportunities for engagement and improved outcomes whereas negative interactions in this sample led to poor care and lower provider-patient engagement.

IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH
- Learning from PWID’s experiences may foster care engagement. Future work should examine specific interventions to develop engagement.
- Participatory research with PWID has potential to improve the health of PWID.
- One champion makes a HUGE Difference
- Collaborate on the plan: Recognize decision-making for patients as possible stigma
- Openly discuss triggers for drug use and how the environment can minimize these
- Care about PWID “more than they care for themselves”
- Consider the impact of taking away “freedoms” on overall health, consider protocols that allow for these to be undone

REFERENCES
- St Marie, B. (2014). Health care experiences when pain and substance use disorder co-occur. “Just because I am an addict doesn’t mean I don’t have pain”. Pain Medicine, 15 (12), 2075-2086. https://doi.org/10.1111/pme.12399

DISCLOSURE: The study received financial support from the University of New Hampshire’s Murkland Interdisciplinary Scholars Team
DEscribing the Phase I Oncology Clinical Trial Population: A Retrospective Chart Review

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BACKGROUND/SIGNIFICANCE

- Exciting discoveries are changing the face of early-phase oncology clinical trials. The overarching goal of oncology clinical trials is to improve the health and quality of life of patients with cancer.
- Participation in clinical trials add complexity to the life of participants.
- Clinical trial participants are generally among the most functionally well of the cancer patient population, yet, they experience similar symptom burdens to advanced cancer patients once they are receiving treatment on clinical trials.1,2
- Many are living longer with successful cancer treatments as a result of clinical trials.2
- Despite the exciting new therapeutic approaches evaluated in early-phase clinical trials, these novel therapies can add complexity to patients’ care.
- Little is known about the use of supportive services among participants in early-phase clinical trials.
- This patient population provides a unique opportunity to explore the patient experience in early-phase trials.

METHODS

- An observational study involving a retrospective chart review of persons with cancer enrolled in a Phase I clinical trial from 2017-2019
- All statistical analysis was performed using SPSS v.24 software

RESULTS

| TABLE 1: PARTICIPANT CHARACTERISTICS (N=426) |
|-----------------|----------|
| Age             | 20.5 - 85.2 years (mean= 60.5 years) |
| Gender          |          |
| Female          | 239 (56.1%) |
| Male            | 187 (43.9%) |
| Race            |          |
| Caucasian       | 363 (85.1%) |
| Asian           | 24 (5.6%)  |
| African American| 7 (1.6%)   |
| Days on Treatment|         |
| Yes             | 0 - 777 days (90.1 days) |
| No              |          |
| Metastatic disease - Yes | 416 (97.7%) |
| Metastatic disease - No  |          |
| 1-2 sites       | 237 (55.6%) |
| 3 or more sites | 188 (44.1%) |
| Performance Status: 0-1 | 421 (96.8%) |
| GI Cancers      | 94 (22.1%) |
| Lung            | 85 (20%)  |
| Breast          | 45 (10.6%) |

CONCLUSIONS

- Phase I clinical trial participants often have advanced stages of disease and utilize high rates of supportive care resources.
- Phase I clinical trial participants represent a population who may benefit from interventions targeting their supportive care needs.

IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH

- Findings will ultimately lead to improvements in care and the patient experience of clinical trial participants.
- Knowledge of trends and use of supportive care resources while participating in early-phase oncology clinical trials will guide the development of targeted interventions (type, timing, intensity).

REFERENCES


ACKNOWLEDGEMENTS

- This study is funded by the ESSCO MGH Breast Cancer Research Fund.
- This study was approved by the Partners Institutional Review Board, Protocol Number: 2019P002155.
BACKGROUND

- Delirium is a common, preventable complication that occurs in up to 60% of elderly acute care orthopedic trauma patients.¹
- It is associated with prolonged length of stay, increased utilization of healthcare services, and higher one-year mortality.²
- Nutritional status prior to hospitalization is associated with increased risk for delirium. Recent studies report worse outcomes for malnourished, delirious patients.³
- Few studies have investigated this association among elderly orthopedic trauma population in the United States.

AIM/HYPOTHESIS

- Examine the association between pre-admission nutritional status and new-onset delirium (NOD) among elderly orthopedic fracture patients.
- Pre-admission nutritional status is associated with NOD in elderly, acute care, orthopedic trauma patients.

METHODS

- Study Design/Setting – Retrospective analysis of data from the Massachusetts General Hospital (MGH) Geriatric Inpatient Fracture Trauma Service (GIFTS) research repository.
- Study Participants – Patients with GIFTS consultation between January 2017 through August 2018 (n=644).
- Exclusion Criteria – History of dementia, moderate or severe cognitive impairment or delirium during initial GIFTS consultation.
- Intervention – GIFTS consultation with 24 hours of admission.
- Data Analysis – Multiple variable logistic regression.

RESULTS

- The incidence of NOD was (93/471), 20%. Patients with poor nutritional status, as defined by the MNA-SF score were 14% more likely to develop delirium (OR 1.14; 95% CI = 1.05-1.28).
- Dichotomizing nutritional status demonstrated that malnourished patients (MNA-SF 0-7) had a two-fold higher risk (OR 2.07; 95%CI 1.01-4.35) of developing NOD compared to patient who were not malnourished (MNA-SF 8-14).

<table>
<thead>
<tr>
<th>Table 1. Demographic and clinical features of study cohort (n=471)</th>
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<tbody>
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<td>Age (years)</td>
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CONCLUSIONS

- In hospitalized, elderly, orthopedic trauma patients, poor nutritional status may be a modifiable risk factor for NOD.
- Future studies are needed to determine if aggressive nutritional interventions can reduce the incidence of NOD and improve outcomes in this cohort of patients.

REFERENCES

BACKGROUND/SIGNIFICANCE

Structured transitional care (TC) is the planned, purposeful transfer from pediatric to adult care that aims to maintain high quality, developmentally appropriate care. Little is known about how endocrine TC is structured internationally, the process of TC, and what outcomes are a priority for endocrine TC.

RESULTS

Invitations were sent to authors of publications/posters on endocrine TC from the past 10 years. Eight responses were recorded from academic medical centers across seven countries (Chile, Denmark, Finland, France, Netherlands, Switzerland, and U.S.A). Transition care was deemed structured (n=3), semi-structured (n=2) and unstructured TC (n=3). Only 2/8 received institutional funding. Two practices involved nurses in assessing transition readiness and cited direct clinical care, therapeutic education and emotional support for AYAs/families as important contributions. Groups lacking nursing involvement expressed desire for a nursing role if financed.

The most commonly used ‘Got Transition’ core elements were: providing supporting materials, confirming adult visit and consulting with adult providers. Only one group formally collected TC outcome data. “Self-management” was rated the most important TC outcome. “Understanding the condition/complications” and “attending medical appointments” were seen as having relatively higher priority for endocrine TC. Barriers related to lack of financial support and low institutional priority. Involving key stakeholders facilitated implementation. Having a dedicated nurse was noted as an opportunity for improving TC.

METHODS

The Donabedian framework (structure-process-outcome) guided the international web-based survey examining TC programs for adolescents and young adults (AYAs) 16-25 years-old. The survey examined: 1) best practices i.e. six core elements of TC (Center for Health Care Transition Improvement ‘Got Transition’); 2) nursing involvement; 3) perceived importance of the ‘10 priority outcomes’ identified by an international multidisciplinary Delphi process (Fair et al. JAMA Pediatrics, 2016); and 4) promoters/barriers to implementation. Descriptive analysis was conducted for close-ended questions and thematic analysis for open-ended questions. Rankings by endocrine clinics were compared to the ‘10 priority outcomes’.

CONCLUSIONS

Implementation of structured TC has been fragmented and most practices do not fully utilize recommended best practices (‘Got Transition’). Few practices formally collect outcome data. The major perceived barrier to implementing TC is financial. Promoters of effective implementation included stakeholder engagement and a dedicated TC coordinator. Clinics incorporating transition nurses value their discipline-specific contributions.

IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH

The pilot study points to a role for nursing in providing comprehensive, high quality care for AYAs with chronic endocrine conditions. A larger sample is needed to validate pilot findings.
IDENTIFYING FACTORS INFLUENCING RELATIONSHIP FORMATION BETWEEN PEDIATRIC NURSES AND INTERNS
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Ariel S. Frey-Vogel, MD, MAT
Kristina Dzara, PhD, MMSc
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BACKGROUND
• Collaborative relationships between nurses and interns are fundamental to providing optimal patient care
• Relationships allow disciplines to work collaboratively, learn from each other, and provide enhanced care
• While there are many potential barriers and facilitators of collaborative relationships, it is not clear what factors are necessary for their successful development

PURPOSE
• This study explored nurse and intern experiences working together to identify factors that influence or impede collaborative relationships

METHODS
• Three focus group discussions on pediatric units in an academic medical center
• One focus group included nurses (n=5) and two included second year pediatric residents reflecting on their intern year (n=2 and n=4)
• Thematic data analysis completed by three independent coders resulted in six themes

RESULTS
• This model describes how the identified factors interact
  • Importantly, both nurses and residents
    – value the importance of effective, in-person communication
    – aspire to be viewed as capable in their roles
    – appreciate that trust and respect are essential for patient care
    – understand that time is needed for these to occur
  • Nurses desire to be valued members of the healthcare team
  • Residents desire to be respected as physicians in training
  • Barriers to relationship formation between nurses and interns include:
    – Lack of role understanding
    – Relying on traditional hierarchical assumptions
    – Working in parallel rather than collaboratively
    – Being overwhelmed
  • Ultimately, both groups felt time was needed to build trust, respect, effective communication, and role confidence
    – For interns, this meant learning what constitutes the nursing role while gaining understanding of their own role and responsibilities
    – For nurses, this meant figuring out what they can trust interns with over time
  • Over time, nurses and interns learn to communicate with each other, gain and give respect, build trust, and determine their own role as well as the role of the other group

CONCLUSIONS
• There are four key shared values that should be met for a positive relationship between nurses and interns to form:
  – good communication
  – mutual respect
  – building trust
  – role formation
• These values take time to be established and may have to be built and rebuilt when they are breached
• Determining how to decrease the time to establish these factors may enable relationship formation to occur earlier in the intern year

IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH
• By finding ways, early in the intern year, to enhance communication, establish respect and trust, and support role understanding, nurse and intern relationships could be formed sooner
• Earlier relationship formation may allow the pair to work more collaboratively, learn from each other, and provide enhanced care to patients
• Programs to partner nurses and interns to receive interprofessional core competency training and shadow each other to gain role understanding may foster interdisciplinary relationship development
• Our model suggests that shadowing alone may not be effective unless it were complemented by a longitudinal curriculum over the intern year with an explicit emphasis on communication, respect, trust, and role understanding
BACKGROUND

- Nearly one-half of all U.S. workers report having work stress.
- Work stress, a type of stress, stimulates the stress response and leads to cardiovascular and metabolic illness.
- One in five U.S. employees work non-standard (shift work) hours.
- Approximately 80% of nurses report work stress. Nurses working in a hospital setting are typically shift workers.
- Shift work has associated increased risk of cardiometabolic disease and early mortality.

RESEARCH QUESTIONS

1. Determine whether work environment moderates the relationship between shift work type and health behaviors.
2. Determine whether work stress mediates the relationship between shift work type and health behaviors.

SIGNIFICANCE

- Cardiometabolic disease includes non-modifiable and modifiable risk factors.
- Modifiable risk factors for cardiometabolic disease include overweight/obese, high BP, dyslipidemia, and sleep, which are also related to stress response and the untoward consequences of work stress.
- Nurses are at risk for cardiometabolic disease secondary to work stress and/or shift work.
- Risk for cardiometabolic disease is further compounded through lack of participation in proximal risk factors for cardiometabolic disease.

METHODS

A cross-sectional, secondary analysis design was used to explore relationships between and among variables using data derived from the Boston Hospital Workers Health Study: Using a longitudinal database to assess the health impact of work organization in hospitals.

A1. Determine whether work environment (work relationships) moderates the relationship between shift work type (day, evening, night, rotating) and health behaviors (diet, sleep).

H1: Positive work relationships reduces the impact of shift work type (day, evening, night, rotating) on health behaviors (diet, sleep).

A2. Determine whether work stress (job strain) mediates the relationship between shift work type (day, evening, night, rotating) and health behaviors (diet, sleep).

H2: High work stress (job strain) increases the impact of shift work type (day, evening, night, rotating) on health behaviors (diet, sleep).

RESULTS

Diet. There was a slight negative relationship between work stress and health behaviors. As work culture became more positive, diet was worse. For rotating shift workers, the relationship was positive. As culture became more positive, diet improved. Diet improved as coworker support increased for the evening shift workers compared to the day shift workers. The effect of bullying on the relationship between shift work and diet was different for the evening shift versus the day shift. For evening shift workers, as bullying increased, diet worsened. There was no effect of bullying on diet for day shift workers. The relationship between work stress and shift work type did not affect diet.

Sleep. There was a significant difference in the number of hours of sleep for the night shift versus day shift, with the night shift reporting less sleep than the day shift. For evening shift workers, there was an overall effect of supervisor support on sleep. As supervisor support increased the number of hours slept increased. The effect of coworker support on the relationship between shift work and sleep was different for the evening shift versus the day shift. There was a stronger effect of coworker support on hours slept with evening shifts. As coworker support increases, the amount of sleep increased. The relationship between work stress and shift work type did not affect sleep.

INSTRUMENTS

Health Behaviors
- Diet: 10 questions from PrimeScreen, a brief dietary screening tool
- Sleep: 7 questions from Pittsburg Sleep Quality Index

Work environment
- Collegiality: 4 questions from People Oriented Culture Subscale
- Bullying: 4 questions from Workplace Psychological Violence Behaviors Questionnaire
- Support: 2 questions for coworker subscale and 3 questions from supervisor subscale within Job Content Questionnaire

Work Stress
- 14 job demands subscale questions from Job Content Questionnaire
- 9 job control subscale questions from Job Content Questionnaire

DISCUSSION

The purposes of this secondary analysis were (1) to determine if work environment moderated the effect of shift work type on proximal health behaviors that increase risk for cardio-metabolic diseases and (2) to determine if work stress mediated the effect of shift work type on proximal health behaviors that increase risk for cardio-metabolic diseases. Measures of work environment, e.g., bullying and collegiality, as well as measures of work stress were used. Findings suggested that work environment significantly moderated the effect of shift work type and health behaviors (diet, sleep). The effect of work environment on evening shift workers was especially significant. Evening shift workers were the lowest in number, yet they had some significant findings in both diet and sleep. Nurses reported work stress. The prevalence of work stress was high (66%) among nurses, but no mediation effects were found.

CONCLUSION

Further study is needed regarding the effect of work environment and work stress on the relationship between shift work and proximal health behaviors. The data in this study were limited by the structure and content of the larger dataset. In the nurse population working in two large urban hospitals work environment moderated the relationship between shift work type and health behaviors in nurses. The magnitude of effect varied shift to shift. Work stress had no effect in the relationship between shift work type and health behaviors.

FUTURE DIRECTIONS

Future studies should examine the long-term effects of work environment on proximal health behaviors that increase risk of cardio-metabolic disease. A closer examination of the effect of work stress in nurses is warranted. Exercise was not included in this study; however, exercise would be an important to assess in terms of work environment and work stress.

SELECT REFERENCES

ETHICS CONSULTATION AND THE OPIOID EPIDEMIC

Julia Bandini, PhD1,8; Andrew Courtwright, MD, PhD HEC-C2,3; Emily Rubin, MD, JD MSHP3,4; Kimberly Erler, PhD, OTR/L, HEC-C3,5; Mary Zwirner, LICSW, MSW, RN, HEC-C3,6; M. Cornelia Cremens, MD, MPH3,7; Thomas McCoy, MD3,7; Ellen M. Robinson, RN, PhD, HEC-C1,3

BACKGROUND

- Recent dramatic rise in opioid use, addiction, and overdose in the U.S.1,2
- Increase in the number of patients hospitalized with opioid use disorder (OUD)
- There is a gap in research to date on ethical issues that arise in treating and caring for patients hospitalized with OUD.1


RESEARCH GOAL

Retrospective cohort study to characterize ethics consult questions among inpatients with OUD at Massachusetts General Hospital (MGH) from 1993-2017.

METHOD

- Database of ethics consults from 1974-2018 – Every 5 years from 1974-2007, then yearly
- Demographic, clinical, and consult-related data – 69 fields
- 286 possible variables
- Managed in REDCap
- Reason for ethics consultation was identified using an inductive analytic process followed by iterative sampling.

OUD CONSULTS AND THEMES

<table>
<thead>
<tr>
<th>Comparison Between Ethics Consultation For Cases Involving Opioid Use Disorder Versus Other Reasons For Consultation</th>
<th>Non-OUD case (n=1019)</th>
<th>OUD case (n=42)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, median (IQR)</td>
<td>65 (53.77)</td>
<td>62 (28.54)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Female, n (%)</td>
<td>415 (40.8)</td>
<td>20 (47.6)</td>
<td>0.42</td>
</tr>
<tr>
<td>White, n (%)</td>
<td>722 (73.4)</td>
<td>30 (71.4)</td>
<td>0.72</td>
</tr>
<tr>
<td>Born outside the United States, n (%)</td>
<td>242 (29.5)</td>
<td>1 (3.3)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Receiving disability benefits, n (%)</td>
<td>215 (21.2)</td>
<td>1 (47.6)</td>
<td>0.007</td>
</tr>
<tr>
<td>Un- or underinsured, n (%)</td>
<td>219 (21.7)</td>
<td>30 (73.2)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Homeless, n (%)</td>
<td>22 (2.4)</td>
<td>12 (29.3)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Mental health co-morbidity, n (%)</td>
<td>74 (7.3)</td>
<td>10 (24.8)</td>
<td>0.001</td>
</tr>
<tr>
<td>Time to ethics consultation, median (IQR)</td>
<td>11 (4-24)</td>
<td>7 (3-18)</td>
<td>0.10</td>
</tr>
<tr>
<td>&gt;1 meeting, n (%)</td>
<td>301 (35.0)</td>
<td>9 (24.3)</td>
<td>0.22</td>
</tr>
</tbody>
</table>

Characteristics of Patients in Ethics Consultation Cases Involving Opioid Use Disorder (n=42)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>23 (54.8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitalized in intensive care unit, n (%)</td>
<td></td>
</tr>
<tr>
<td>Consulting service, n (%)</td>
<td></td>
</tr>
<tr>
<td>Internal medicine</td>
<td>30 (71.4)</td>
</tr>
<tr>
<td>Surgery</td>
<td>8 (19.1)</td>
</tr>
<tr>
<td>Other</td>
<td>4 (9.5)</td>
</tr>
<tr>
<td>Advance care planning documents, n (%)</td>
<td></td>
</tr>
<tr>
<td>Formal health care proxy document</td>
<td>19 (45.2)</td>
</tr>
<tr>
<td>Living will</td>
<td>1 (2.4)</td>
</tr>
<tr>
<td>Disposition, n (%)</td>
<td></td>
</tr>
<tr>
<td>Deceased</td>
<td>17 (40.5)</td>
</tr>
<tr>
<td>Home</td>
<td>12 (28.6)</td>
</tr>
<tr>
<td>Skilled nursing facility</td>
<td>8 (19.1)</td>
</tr>
<tr>
<td>Skilled nursing facility</td>
<td>4 (9.5)</td>
</tr>
</tbody>
</table>

STUDY COHORT

ETHICS CONSULTANTS

1. Excluded (n=10)
2. Non-OUD (n=41)
3. OUD (n=42)
4. SUD Related (n=116)
5. Safe discharge planning (n=27)
6. Challenging behavior (n=6)
7. Life-sustaining treatment (n=21)
8. Appropriateness of surgery (n=8)
9. Decisions for Unrepresented (n=3)

CONSULT THEMES

- Safe discharge planning:
  - Medical team’s responsibility for patient safety after discharge
  - Mitigating risk of relapse
  - Opioid medications in the home and where to safely discharge the patient

- Challenging behavior/pain management:
  - Non-adherence to advice for treatment
  - Verbal or physical threats to care team
  - Behaviors that adversely impacted the provision of nursing care
  - Managing self-reported pain without potentiating OUD

- Life-sustaining treatment (LST):
  - Family desire to withhold and/or withdraw LST vs. team opinion that patient could recover
  - Team opinion that patient was at end of life vs. family desire to continue LST

- Appropriateness of surgery:
  - Should surgical interventions (valve replacement, organ transplant) be offered if ongoing drug use may adversely impact success?

- Decision-making for unrepresented patients:
  - Who should make medical decisions for patients with OUD who are homeless or socially-isolated and who do not have a surrogate decision-maker?

DISCUSSION

- Our primary findings in this single-center retrospective cohort study were that the number of ethics consultations for patients with OUD increased beginning in 2009, which is parallels trends in the opioid epidemic in the US.
- OUD consult patients were more likely to be younger, receiving disability benefits, more likely to be un- or underinsured, and more likely to have a co-morbid mental health diagnoses than other ethics consultation cases.

“MULTIFACETED” SITUATIONS

- Medical
- Behavioral
- Social
- Intersecting Contexts

KEY ROLES OF ETHICS CONSULTANTS

- Emphasized the social complexity of these cases
- Called attention to the person behind the opioid use disorder
- Minimized stigmatization
- Encouraged reflection on patient characteristics (including age, ethnicity, gender and/or mental health diagnoses)
- Mediated conflict
- Emphasized utilization of inpatient substance use disorders consult (ACT) service and/or the psychiatry consult liaison service

CONCLUSIONS AND RESEARCH-PRACTICE IMPLICATIONS

- Rise in requests for OUD ethics consults parallel trends in the opioid epidemic in the US
- Multidisciplinary teams needed to manage disease burden, psycho-social-behavioral and ethical complexities
- Ethics consultants provide a source of support to clinicians, patients and families in navigating decision making
- Additional research should focus on the experience of ethical decision making by families and clinicians in these emotionally charged situations
EXPERIENCE WITH A REVISED HOSPITAL POLICY ON NOT OFFERING CARDIOPULMONARY RESUSCITATION

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BACKGROUND

- MGH has had a “Doing No Harm” policy since 2007
- Part of a broader life-saving treatment policy (1998)
  - “Physicians and other health care providers are not obligated to offer or provide life-saving treatments that have no clinical indication or have no reasonable likelihood of providing benefit to the patient, or more benefit than harm, in the context of his or her values, prognosis, and agreed-upon treatment goals.”
- If CPR will cause harm without bringing meaningful benefit, particularly in the context of the patient’s values and prognosis, physicians should not offer it
- Experience with the policy suggested it was being invoked for two distinct groups:
  - Patients who were believed to be imminently or actively dying and for whom CPR was not expected to reverse their dying process or intervene on their underlying disease
  - Patients who were not imminently dying but whom clinicians believed – because of debility or medical condition – would not survive CPR to the point of successful hospital discharge.
- The Doing No Harm policy was revised in 2013 to reflect these separate clinical situations

OBJECTIVES

- To evaluate cases considered under the revised policy, including the recommendations of ethics consultants regarding code status, and how often and in which situations these recommendations were followed
- To assess whether age, race/ethnicity, country of birth, or functional status prior to admission was associated with the decision to withhold CPR without patient or surrogate consent

RESULTS

Characteristics of Patients Consulted for Decision about Do Not Resuscitate Status (n=116)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Accepted Recommendation</th>
<th>Did Not Accept Recommendation</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, y, median (IQR)</td>
<td>75 (67-81)</td>
<td>72 (63-81)</td>
<td>0.007</td>
</tr>
<tr>
<td>Race/ethnicity, n(%)</td>
<td>White (n=43)</td>
<td>25 (21-30)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Black (n=17)</td>
<td>25 (21-30)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asian (n=5)</td>
<td>9 (7.6)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hispanic (n=6)</td>
<td>6 (5.2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other (n=59)</td>
<td>5 (4.2)</td>
<td></td>
</tr>
<tr>
<td>Born outside the United States, n(%)</td>
<td>48 (41.4)</td>
<td>64 (55.2)</td>
<td></td>
</tr>
<tr>
<td>Hospitalized in intensive care unit, n(%)</td>
<td>51 (44.0)</td>
<td>51 (44.0)</td>
<td></td>
</tr>
<tr>
<td>Critically ill, n(%)</td>
<td>75 (64.7)</td>
<td>75 (64.7)</td>
<td></td>
</tr>
<tr>
<td>Days hospitalized prior to consultation days, d, median (IQR)</td>
<td>11 (4-21)</td>
<td>11 (4-21)</td>
<td></td>
</tr>
<tr>
<td>Source of full code request, n(%)</td>
<td>Patient</td>
<td>7 (6.0)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Surrogate</td>
<td>109 (94.0)</td>
<td></td>
</tr>
<tr>
<td>Relationship to patient, n(%)</td>
<td>Adult child</td>
<td>47 (41.3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adult Spouse</td>
<td>34 (31.2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adult Sibling</td>
<td>11 (11.0)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>17 (15.5)</td>
<td></td>
</tr>
</tbody>
</table>

Comparison Between Cases in Which Cardiopulmonary Resuscitation (CPR) Was and Was Not Withheld

<table>
<thead>
<tr>
<th>Variable</th>
<th>CPR Withheld (n=53)</th>
<th>CPR Not Withheld (n=19)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situation 1 case</td>
<td>38 (71.7)</td>
<td>7 (36.8)</td>
<td>0.007</td>
</tr>
<tr>
<td>Age, y</td>
<td>67.9±17.1</td>
<td>61.4±21.8</td>
<td>0.19</td>
</tr>
<tr>
<td>Non-white race/ethnicity</td>
<td>21 (39.6)</td>
<td>8 (42.1)</td>
<td>0.85</td>
</tr>
<tr>
<td>Born outside the United States</td>
<td>20 (39.2)</td>
<td>7 (38.9)</td>
<td>0.98</td>
</tr>
<tr>
<td>Complete dependence</td>
<td>23 (43.4)</td>
<td>12 (63.2)</td>
<td>0.14</td>
</tr>
<tr>
<td>Critically ill</td>
<td>39 (73.6)</td>
<td>10 (52.6)</td>
<td>0.09</td>
</tr>
</tbody>
</table>

CONCLUSIONS

- The median time from DNR to death among patients where DNR was ordered without consent was 4 days (IQR 1-12). The 90-day mortality rate among these patients was 88.2%.
- Six patients who were made DNR under Situation 1 survived to discharge, two of whom were enrolled in hospice and died shortly thereafter.
- Among the 19 patients who remained full code despite ethics consultant recommendation, 6 had an in-hospital arrest. Of those, only 1 was successfully resuscitated, with significant neurologic injury.
- Three patients who remained full code despite ethics consultant recommendations were alive at the end of the study follow-up but were functionally dependent and living in a health care facility.

IMPLICATIONS FOR PRACTICE AND/OR FUTURE RESEARCH

- Nurses, house officers and respiratory therapists in direct care roles are first line clinician responders to provide cardiopulmonary resuscitation. When there is clinical consensus that CPR is non-beneficial and harmful for a patient, clinicians appreciate ethics consultation and organizational policy support to aid in the careful consideration to protect such patients from harm.
- Future research seeking surrogates’ perceptions in application of a ‘Do No Harm’ policy and their experiences during and after their loved one’s death or hospital discharge would provide further insight into the utility of this policy that intends to protect patients nearing end of life from inappropriate and harmful resuscitation.
BACKGROUND

- The MGH Heart Center Intensive Care Unit (HCICU) is comprised of the cardiac intensive care unit (CICU) and cardiac surgical intensive care unit (CSICU). RNs from both ICUs voiced moral distress about decision making regarding candidate selection for transplant and mechanical circulatory support (MCS) as well as continuing LST for patients receiving prolonged MCS and other continuing LSTs when recovery is not promising.
- HCICU RNs aimed to increase engagement in ethical deliberations about the benefits/burdens of LST for critically ill cardiac patients, as well as increase participation in cardiac transplant and MCS interprofessional deliberations where decisions are made about eligibility.

RESEARCH QUESTIONS

- What is the impact of unit education and interdisciplinary forums for ethical deliberation about challenging clinical cases on RN moral distress, ethics self-efficacy and perception of ethical environment?
- Does RN engagement in structures and processes that evaluate patient candidacy for cardiac transplant and MCS impact moral distress, ethics self-efficacy and perception of ethical environment?

METHODS

- Pre and Post Surveys administered through REDCap
- Olson’s Hospital Ethical Climate Survey-SF (HECS) is a 16-item scale (5-point Likert scale) designed to assess RN perceptions of workplace ethical climate
- Measure of Moral Distress Health Care Professionals Scale- (MMD-HP) is a 27-item questionnaire that measures frequency and intensity of moral distress experienced in clinical situations.
- Ethics Self Efficacy Scale (SEED) is based on Bandura’s template for constructing self-efficacy scales (UCLA developed by Pavlish & Brown-Saltzman).

PRACTICE INTERVENTIONS

- RN participation in Transplant and VAD Multidisciplinary Deliberation Meetings
- Educational strategies:
  - HCICU education facilitated in small group discussions and lectures by HC Interdisciplinary providers on many components of transplants and MCS
  - Dissemination clinical and ethical literature on related topics
- Ethics Rounds: Interdisciplinary discussions to reflect upon cases and ethical implications of practice
- Long Term Care Rounds

STUDY RESULTS

- 85 participants completed at least 1 of the 3 assessments (HECS, SEED, or MMD-HP) pre-intervention and 51 participants completed at least one assessment post-intervention. Participants completing the pre- and post-surveys did not differ significantly on age, education, years practicing as a registered nurse or years practicing as a nurse in the ICU (Table 1)

|   | 50-59 | 60-69 | 70-79 | 80-89 | <90 | Total 
<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>57</td>
<td>24</td>
<td>7</td>
<td>6</td>
<td>0</td>
<td>94</td>
</tr>
</tbody>
</table>

- Significant change in SEED (ethics self efficacy) scores between pre-and post-interventions survey (W = 892.5, p = 0.002). Participants completing the post survey had significantly higher SEED scores than those completing the pre survey
- No significant difference in HECS (ethical climate) scores (t(97.19) = 0.33, p = 0.74) and MMD-HP (moral distress) scores (t(95.68) = -1.78, p = 0.08) between the pre- and post surveys
- Using composite score of the HECS (ethical climate), 45.88% (39/85) participants completing the HECS pre-intervention indicated a positive ethical climate. 45.10% of participants completing the HECS post-intervention indicated a positive ethical climate; thus, not a significant difference between pre- and post survey administrations in the overall perception of positive or negative ethical climate (X²(1) = 0.00, p = 0.95).

CONCLUSIONS

- Self-efficacy in ethical decision making scores significantly increased before and after the practice intervention, suggesting that RNs perceived an enhanced voice in challenging decision making on behalf of patients
- Older nurses & nurses with more years of ICU practice rated ethical climate as more positive and had higher self efficacy scores.
- Moral distress scores did not change c/w emerging expert thought/literature that patient care in quaternary care settings will always present morally distressing situations given interface of technological advances and willing patients or their families who seek to extend their lives with such advances. Experienced nurses can remain resilient and highly effective in such situations, given their capacity for moral agency, moral imagination and moral community (Traudt, Liaschenko & Fenn, 2016)
- Educational forums with multiple disciplines can enhance interprofessional collaboration and positively impact RN ethics self efficacy
- Mentoring RNs new to HCICUs in ethical decision making may be critical to job satisfaction and retention

FUTURE DIRECTIONS

- Continue to include staff RNs in VAD and transplant committee meetings
- Continue education regarding advanced cardiac disease and advanced therapeutic options (medicine, surgery, MCS, transplant), including the impact of disease and therapies on patients and families.
- Continue to create reflexive spaces with interprofessional colleagues about ethical decision making for patients, families and clinicians in the experience and care of these patient populations
- Actively engage and support staff to foster resiliency given the ethically challenging practice environment of leading quaternary care Heart Center ICUs
- Assess opportunities to further integrate RNs into decision making processes for their patients and collaborate with our multidisciplinary teams.
FINANCIAL TOXICITY IN ONCOLOGY PATIENTS:
THE IMPACT OF AN EDUCATIONAL INTERVENTION FOR NURSES
Erika M. Rosato DNP MHA RN OCN NE-BC
Melissa R. Taylor DNP MPH RN CEN CPEN, DNP Scholarly Project Advisor
Jill Pedro DNP MSN RN ACNS-BC ONC, DNP Scholarly Project Mentor
Northeastern University and Massachusetts General Hospital, Boston, MA

BACKGROUND

- Financial toxicity (FT) describes the harmful personal financial burden faced by patients and families receiving costly medical care (Zafar, 2016).
- Common concerns include loss of earnings for the patient and family members and out-of-pocket costs including coinsurance, deductibles, copays and premiums (McDougall, Ramsey & Shih, 2014).
- Evidence suggests oncology patients pay more out-of-pocket for care than those with other chronic illnesses (Zafar, 2016).
- Ramifications of FT range from emotional distress to personal bankruptcy.

PURPOSE

The purpose of this project was to educate oncology nurses on the impact of FT on oncology patients and to increase nurses’ knowledge and confidence on how to facilitate management of FT in oncology patients.

METHODS

Design: This project received IRB approval and was conducted as quality improvement.
Sample and Setting: A convenience sample of 313 oncology registered nurses that belong to the Boston Oncology Nursing Society (BONS) were invited to participate.
Procedures:
- Based on the most contemporary information on FT, the investigator developed, narrated and electronically administered a web-based educational program for oncology nurses.
- Data were collected over a 7-week period via web-based surveys.
- Multiple choice questions elicited participant demographics.
- Likert-scale style, and open-ended questions were used to measure nurses’ pre/post educational program knowledge and confidence related to FT.
- A course evaluation followed completion of the program.

DATA ANALYSIS

Descriptive and comparative statistics were utilized to summarize the participant demographics and survey results. Data were analyzed using IBM Statistical Package for the Social Sciences (SPSS), version 25.

RESULTS

Of 313 BONS members, 33 nurses completed the study requirements for a recruitment rate of 10.5%.

- Confidence, Perception of Knowledge and Knowledge Related to Financial Toxicity
  - Pre and post survey item results revealed statistically significant improvements in nurses’ confidence, perception of knowledge and knowledge related to FT of oncology patients (Tables 1, 2).
  - Cumulative results for confidence and knowledge of FT (i.e., perception of knowledge and knowledge) were examined by assigning one point for each correct answer, and revealed statistically significant improvements following the education (<0.001-0.016).

Course Evaluation

- 29 of the 33 participants completed a course evaluation.
- Most participants found the program content “extremely useful” to their practice (54%) and meeting their needs (78%).
- Thematic analysis of open-ended questions revealed that nurses were interested in learning more about the cost of care and impact on patients, resources available for patients and families, and the COST (COMprehensive Score for Financial Toxicity) tool used to assess patients for FT.

DISCUSSION

Oncology nurses reported significant increases in confidence and knowledge about FT following the educational intervention.
- Next steps will be to expand this educational program to a larger audience.
- Future research should explore educating nurses caring for other patient populations who are at risk for FT and implementation of a standardized FT assessment tool as part of a comprehensive nursing assessment.

TABLE 1: CONFIDENCE AND PERCEPTION OF KNOWLEDGE

<table>
<thead>
<tr>
<th>CONFIDENCE Level</th>
<th>Pre n (%)</th>
<th>Post n (%)</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>5 (15.2)</td>
<td>21 (63.6)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Somewhat Agree</td>
<td>12 (36.4)</td>
<td>9 (27.3)</td>
<td></td>
</tr>
<tr>
<td>Neither Agree or Disagree</td>
<td>6 (18.2)</td>
<td>1 (3.0)</td>
<td></td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>7 (21.2)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>3 (9.1)</td>
<td>1 (3.0)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PERCEPTION OF KNOWLEDGE</th>
<th>Pre n (%)</th>
<th>Post n (%)</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am knowledgeable regarding the costs associated with the care my patients receive</td>
<td>Strongly Agree</td>
<td>3 (9.1)</td>
<td>13 (39.4)</td>
</tr>
<tr>
<td>Somewhat Agree</td>
<td>13 (39.4)</td>
<td>42 (14.1)</td>
<td></td>
</tr>
<tr>
<td>Neither Agree or Disagree</td>
<td>7 (21.2)</td>
<td>3 (9.1)</td>
<td></td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>6 (18.2)</td>
<td>1 (3.0)</td>
<td></td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>4 (12.1)</td>
<td>1 (3.0)</td>
<td></td>
</tr>
</tbody>
</table>

TABLE 2: KNOWLEDGE

<table>
<thead>
<tr>
<th>Question</th>
<th>Pre n (%) correct</th>
<th>Post n (%) correct</th>
<th>Sig (McNemar’s Test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The best time to assess a patient’s financial concerns is? Throughout the Patient’s Course of treatment</td>
<td>25 (75.8)</td>
<td>25 (75.8)</td>
<td>1.00 NS</td>
</tr>
<tr>
<td>Financial Toxicity is defined as? The harmful personal financial burden faced by patients and families receiving cancer treatment</td>
<td>33 (100)</td>
<td>32 (97.9)</td>
<td>1.00 NS</td>
</tr>
<tr>
<td>Which of the following is NOT a symptom of financial toxicity? Drug Addiction</td>
<td>31 (93.9)</td>
<td>31 (93.9)</td>
<td>1.00 NS</td>
</tr>
<tr>
<td>Which of the following services can help prevent financial toxicity? All of the Above</td>
<td>31 (93.9)</td>
<td>30 (90.9)</td>
<td>1.00 NS</td>
</tr>
<tr>
<td>Patients with cancer spend more annually on out-of-pocket treatment-related expenses than patients without cancer</td>
<td>0.033</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The COST screening tool is used to measure financial toxicity in cancer patients</td>
<td>8 (24.2)</td>
<td>27 (81.8)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

*Related Samples Wilcoxon Signed Rank Test
COMPARISON OF SALIVARY BIOMARKERS WITH INFANT DRIVEN FEEDING® (IDF) SCORES
Margaret Settle PhD, RN, NE-BC; Kim Francis PHD, RN, PHCNS- BC; Elizabeth Farland BS; Sergei Roumiantsiev MD, PhD; Paul Lerou, MD
Massachusetts General Hospital, Boston, MA

BACKGROUND
Many preterm infants face oral feeding disorders, possibly related to poorly timed feeding initiation. The Infant Driven Feeding® (IDF) is a method used by clinicians to assess readiness to feed (RTF). A recent study reported the discovery of five salivary biomarkers that predict feeding readiness. Correlating salivary biomarkers with IDF scores may help to improve assessment and validate both approaches.

PURPOSE
This study measured the expression of five salivary biomarkers associated with RTF;plexin A1(PLXNA1), adenosine-monophosphate-activated protein kinase (AMPK), wingless-type MMTV integration site family member 3 (WNT3), neuropeptide Y2 receptor (NPY2R), and nephronophthisis 4 (NPHP4). The levels of gene expression and the preterm infants’ Infant Driven Feeding scores were analyzed to draw comparisons.

DEMOGRAPHICS AND CLINICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>DEMOGRAPHICS</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
<td>CGA® Birth</td>
<td>Birth weight (g)</td>
<td>Apgar 1,5 min</td>
<td>Gender</td>
<td>Multiplicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>33+2</td>
<td>2120</td>
<td>8.9</td>
<td>F</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>28+4</td>
<td>1235</td>
<td>6.8</td>
<td>F</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>32+5</td>
<td>1915</td>
<td>2.6</td>
<td>F</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>33+3</td>
<td>2105</td>
<td>5.7</td>
<td>M</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>33+3</td>
<td>1755</td>
<td>7.9</td>
<td>F</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>33+2</td>
<td>1665</td>
<td>7.9</td>
<td>M</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>33+2</td>
<td>1155</td>
<td>7.8</td>
<td>F</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CGA®= Corrected Gestational Age

<table>
<thead>
<tr>
<th>CLINICAL CHARACTERISTICS</th>
<th>Respiratory Support Days</th>
<th>Oxygen Days</th>
<th>Days from 1st - IOF</th>
<th>DOL to Open Crib</th>
<th>DC/TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
<td>5</td>
<td>TX</td>
</tr>
<tr>
<td>2</td>
<td>31</td>
<td>25</td>
<td>23</td>
<td>33</td>
<td>DC</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>2</td>
<td>12</td>
<td>10</td>
<td>DC</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>0</td>
<td>15</td>
<td>11</td>
<td>DC</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>14</td>
<td>DC</td>
</tr>
<tr>
<td>7</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>TX</td>
</tr>
</tbody>
</table>

IOF = Independent Oral Feeding
DC/TX = Discharge Home/Transfer
N/A = Not Applicable

METHODS
Saliva samples were collected weekly, starting at 33 weeks post-conceptual age (PCA), until the infant progressed to independent oral feeding. Collected saliva was immediately transferred to a stabilizing reagent. The saliva samples underwent a one-step quantitative reverse transcription-polymerase chain reaction (RT-qPCR) amplification for the five aforementioned genes and glyceraldehyde phosphate dehydrogenase for standardization. The gene expression level of the five biomarker genes were compared to IDF scores abstracted from the infant’s electronic medical record.

METHODS (IDF SCORES)
• IDF scores of 1 through 5 are categories of feeding behaviors that indicate the infant’s interest and ability to participate in oral feeding. A score of (1) or (2) indicates interest and ability to orally feed.
• Daily IDF Scores of (1) or (2) were abstracted from each infant’s electronic medical record.
• The frequency of daily IDF readiness and quality of feeding scores of (1) or (2) were counted.
• The weekly count was calculated by summing the number of daily (1) or (2) scores out of 56 feeding opportunities.
• A percentage was calculated from the weekly score counts.

RESULTS
Nineteen salivary samples were collected from seven infants. AMPK and NPHP4 were positively expressed in all samples and their expression level correlated with the infant’s CGA and IDF scores. Infants with increased expression of AMPK and NPHP4 also displayed higher percentages of RTF scores and progressed to independent oral feeding before those who had lower AMPK/NPHP4 expression and RTF scores.

CONCLUSION
Correlation of AMPK and NPHP4 salivary expression with IDF scores may improve assessment of infant feeding readiness and progression to independent oral feeding.

IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH
Further research is needed to explore the relationship between the salivary biomarkers and the IDF method to validate our findings from this study.
Accurate documentation of medical codes in real time contributes to appropriate delivery of life-saving interventions and provides a detailed record to identify opportunities for quality improvement and to reference when medicolegal questions arise.

Informal feedback from pediatric ICU nurses regarding the challenges of code documentation following the implementation of a new electronic health record (EHR) revealed nurses were uncomfortable using the code documentation tool.

BACKGROUND

- An anonymous REDCap survey was distributed to all inpatient nurses working in a single, university-based, quaternary care hospital.
- Participation in the study was voluntary and consent was implied by survey completion.

PURPOSE

To assess nurses’ perception and practices of code documentation and to identify opportunities for improvement.

METHODS

- An anonymous REDCap survey was distributed to all inpatient nurses working in a single, university-based, quaternary care hospital.
- Participation in the study was voluntary and consent was implied by survey completion.

RESULTS

- Surveys distributed: 3121
- Surveys completed: 432 (14%)
  - 81% felt comfortable using computers for personal use
  - 9% were comfortable using the EHR for code documentation
  - 26% participated in a code where details inaccurately recorded in EHR
  - 92% think more practice documenting codes in EHR would be helpful
  - 95% indicated functionality upgrades would improve their ability to accurately document codes in Epic Code Narrator in real time

![ICU Nursing Level of Comfort Using Computers vs Epic Code Narrator](chart1.png)

WHICH METHOD OF CODE DOCUMENTATION DO YOU FEEL IS MORE ACCURATE?

- Documentation on paper with retroactive entry into Epic Code Narrator - 79%
- Real time documentation in Epic Code Narrator - 21%

CONCLUSIONS

- Most inpatient nurses in a single institution feel uncomfortable documenting codes directly into the EHR, and some question the accuracy of this documentation.
- Based on specific recommendations from end-users, improving EHR functionality and increasing opportunities to document simulated codes may ease EHR navigation.
- This may lead to more accurate and efficient documentation and greater nurse satisfaction.

FUTURE DIRECTIONS

Future research and work needs to be focused on increasing the functionality of the code narrator and on opportunities to provide in-situ simulation for code documentation.

REFERENCES:

BACKGROUND AND SIGNIFICANCE

- First Covid 19 cases reported in Wuhan, China in January, 2020.
- The pandemic surged in Massachusetts in April, 2020.
- Patients with Covid-19 developed severe Acute Respiratory Distress Syndrome (ARDS).
- Early proning emerged as a powerful therapy for managing patients with ARDS due to Covid-19.
- A Proning team was launched on April 9, 2020 to support the workload of proning a large cadre of severely ill critical care patients.
- Research has demonstrated that pressure injuries (PIs) are one of the complications of prone positioning, although the highest risk body parts and most effective strategies and products to mitigate PI have not yet been elucidated.

PURPOSE

The purpose of this study was two-fold:

1. Describe trends in PI incidence in adult critical care patients who were prone for severe ARDS due to COVID-19, and
2. Examine effectiveness of products and strategies to mitigate PIs.

METHODS

- Retrospective review of the electronic medical records and Skin/Tissue Safety Reports.
- Data collected on demographic, clinical, laboratory, treatment, and outcome variables.
- Data analyzed using SPSS Version 24.
- Descriptive statistics performed on demographic and physiological variables.
- Fisher’s exact tests were computed for categorical data and Cox regression analysis, for survival analysis.

RESULTS

- **Profile of Patients Proned for COVID-19 (N=147)**
  - Age
  - Gender
  - Race
  - APACHE score
  - Sequential Organ Failure Assessment (SOFA)
  - Cardiac: Low dose vasopressor
  - High dose vasopressor
  - Non-invasive positive pressure ventilation (NIV)
  - Invasive mechanical ventilation (IMV)
  - Mechanical ventilation (MV)
  - ECMO
  - Urea
  - Creatinine
  - Potassium
  - Sodium
  - Glucose
  - PaO2/FIO2
  - D-Dimer
  - Event Type
  - Event Date
  - Event Duration
  - Event Description
  - Event Notes
  - Event Location
  - Event Notes
  - Event Description

- **Profile of Patient Proned for COVID-19 (N=147)**
  - Sequential/Oral Failure Assessment (SOFA) N % Range Mean
  - Cardiac: Low dose vasopressor 12 86 1-12 8
  - High dose vasopressor 1 4 0-1 1
  - Non-invasive positive pressure ventilation (NIV) 6 1 0-6 1
  - Invasive mechanical ventilation (IMV) 99 67 1-99 67
  - Mechanical ventilation (MV) 16 11 1-16 11
  - ECMO 1 6 0-1 0
  - Urea 10 86 1-10 86
  - Creatinine 22 15 1-22 15
  - Potassium 16 86 1-16 86
  - Sodium 10 86 1-10 86
  - Glucose 10 86 1-10 86
  - PaO2/FIO2 13 100 120-257 180
  - D-Dimer 0 0 0-0 0
  - Event Type 1 1 1-1 1
  - Event Date 1 1 1-1 1
  - Event Duration 1 1 1-1 1
  - Event Description 1 1 1-1 1

  - Duration (hr)
  - P:F Ratio

- **Additional Pressure Redistribution Products (4/3-23/20-6/9/20)**
  - Tri-polymer pressure redistribution pads
  - Non-adhesive Re-usable (same patient)
  - Washable Face, ear, chin, occiput, and elsewhere

- **Non-Powered Fluidized Positioner**
  - Mofulable Ear, Face (ETT holder on cheek), Neck (tracheostomy tube), pro-bitant abdomen

- **Comparision of PI Stage and Body Site by ETT Securement Method (N=147)**

- **Pressure Injury Prevention Product Effect by Body Site and PI Stage**

CONCLUSIONS

- This study illustrates the relationship between PI development and extrinsic risk factors (e.g. pressure, prolonged immobility) and intrinsic risk factors (e.g. weight, morphology of tissues, vasopressors)
- Substantially fewer facial PIs with ETT taping than commercial ETT holder that adhered to cheeks
- Pressure redistribution products (PRPs) may vary in effectiveness at preventing PIs
- Members of the Proning Team facilitated rapid diffusion of new PRPs
- Powered support surfaces may be more effective than non-powered support surfaces at redistributing pressure and preventing PIs

IMPLICATIONS

- Standardized methods for testing dressings and devices for properties such as immersion, envelopment, and preservation of perfusion are needed to inform product selection and customize care for patients.

REFERENCES


QUALITY IMPROVEMENT POSTERS
PRIMARY CARE NURSE MANAGERS’ PERCEPTIONS OF WHY LEADER POSITIONS REMAIN VACANT
Jean Bernhardt PhD CNP
Massachusetts General Hospital, Boston, MA

BACKGROUND

- Fewer nurses are seeking their first nursing leadership position.
- Nurse manager positions remain vacant for long periods.
- Health care is shifting to outpatient settings.
- Current nurse managers can create opportunities to attract future nurse leaders.
- Current nurse managers may not demonstrate job fulfillment
  – Appear to be dissatisfied with job
  – Taking work home, 24/7
  – No longer providing direct care

THEMES

Themes from focus groups that informed survey development:
- Current nurse manager finds job undesirable
  – “Who wants to work 24/7?”
  – “I never get out on time”
- Functions of being a nurse manager are not appealing
  – “I have so little time to care for patients anymore.”
  – “I am always in meetings.”
- Thought potential nurse managers more likely to leave than stick around
  – “She plans to go back to school.”

IMPLEMENTATION

- 18 question Likert scale electronic survey developed from prior focus groups
- 5-point scale — strongly disagree to strongly agree
- 15 current nurse managers invited in 2017

OBJECTIVE

To examine perceptions of nurse managers toward opportunities for developing future nurse leaders.

AGREEMENT WITH LEARNING STRATEGIES

<table>
<thead>
<tr>
<th>Strategy</th>
<th>NM median n=12 (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharing management duties</td>
<td>2.2 (0.51)</td>
</tr>
<tr>
<td>Shadowing and observing current nurse manager</td>
<td>3.5 (0.28)</td>
</tr>
<tr>
<td>Covering for nurse manager when out of office</td>
<td>2.8 (0.60)</td>
</tr>
</tbody>
</table>

AGREEMENT WITH PERCEPTION OF FORMAL TRAINING NEEDS

<table>
<thead>
<tr>
<th>Training Need</th>
<th>NM median n=12 (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership development</td>
<td>4.8 (0.65)</td>
</tr>
<tr>
<td>Communication skills</td>
<td>4.8 (0.65)</td>
</tr>
<tr>
<td>Human resources management</td>
<td>3.6 (0.53)</td>
</tr>
<tr>
<td>Financial management</td>
<td>2.8 (0.64)</td>
</tr>
<tr>
<td>Operational management</td>
<td>3.4 (0.76)</td>
</tr>
</tbody>
</table>

IMPLICATIONS FOR PRACTICE

- Nurse managers are not interested in sharing duties or having others cover for them. This may be related to others do not know the job or it will take too much time to train them. This may be a lost opportunity to create supportive experiential learning for future leaders.
- Nurse managers perceive that developing nurse managers need leadership and communication training, but not financial training. This may be representative of an academic medical center.
- Nurse managers behaviors and expressions about their positions may relay an unappealing position that is unattractive to potential nurse managers.

This project was undertaken as a Quality Improvement Initiative at Massachusetts General Hospital, and as such was not formally supervised by the Institutional Review Board per their policies.

*References available.
A PILOT STUDY: VIDEO TEACHING DURING GLOBAL HEALTH MISSIONS TO INCREASE NURSE CONFIDENCE

Kevin Mary Callans BSN RN; Elisabeth Croll BSN RN; Kim Whalen MSN RN; Sarah Buck BSN RN; and Jen Samiotes MSN RN
Massachusetts General Hospital, Boston, MA

BACKGROUND AND SIGNIFICANCE

• A team of MGH affiliated physicians, nurses and other health care professionals conducts medical/surgical care mission trips to deliver care to children with complex airway conditions in developing countries. The team educates in country physicians and nurses so that they are able to provide the same type of care independently.
• During a mission trip to El Salvador, in country nurses expressed a desire to learn how to perform trach care. The contribution of nurses to positive health care outcomes can be undervalued in global health missions.

OBJECTIVES

Improve the confidence of in-country nurses on all aspect of trach care.

IMPLEMENTATION

• The mission team developed an on-line curriculum to assess learning needs and style of learning of in-country nurses.
• Nurses completed a pre-teaching assessment at the beginning of a Spring 2019 mission.
• Four Spanish-language trach teaching videos were made accessible to nurses by pointing their phone cameras at QR codes posted on the floor. The QR codes are links to a MGH affiliated YouTube hosting site.
• A post-teaching assessment was performed at the end of the mission.

PERFORMANCE IMPROVEMENT/OUTCOME

• Ten nurses completed the pre- and post-assessment instrument. The average score increased from 72.2% (an average score of 36.1 out of 50) to 91.2%, an indicator of improved nurse confidence.
• Nurses expressed enthusiasm about taking ownership of their practice and the convenience and ease of watching the teaching videos.

IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH

Video teaching is a low cost, effective methodology for teaching nurses. Smart phones are widely available in many developing countries. The El Salvador nurses retained access to teaching videos after the mission team left and are able to watch them at their convenience. The mission team can share new Spanish-language videos with in-country nurses by emailing the QR codes. Easy access to teaching videos has wide application in the medical mission field.

This project was undertaken as a Quality Improvement Initiative at Massachusetts General Hospital, and as such was not formally supervised by the Institutional Review Board per their policies.
IMPLEMENTING AND EVALUATING
AN URGENT TRIAGE PROGRAM
IN AN AMBULATORY CANCER CENTER
Julie Cronin, RN, DNP, OCN and Laura Chambers White, RN, MPH
Massachusetts General Hospital, Boston, MA

BACKGROUND/SIGNIFICANCE

- Emergency Department utilization by oncology patients is high; approximately 300 patients/month.
- Patients present most often M-F, 8am-4pm.
- Approximately 30% of these patients were discharged from the ED.
- Top five symptoms reported in ED: nausea/vomiting, diarrhea, shortness of breath, pain, and fevers.
- Having symptoms triaged by an experienced oncology nurse may have prevented these patients from presenting to the ED.

PURPOSE

The purpose of this program was to design an urgent triage call line to allow patients to reach a provider to discuss symptoms before presenting to the Emergency Department. The goals were:
- Decrease ED utilization
- Increase patient satisfaction

INTERVENTIONS

- A multidisciplinary task force was formed to design this program. The ONS Telephone Triage for Oncology Nurses 3rd edition book was used to inform the process of nursing triage.
- Triage assessment criteria and EHR standard documentation was developed.
- Nurse training occurred over two-month period and the "pilot" phase occurred over three months.
- A prompt was added to the Cancer Center telephone line to alert patients of new triage line availability.
- "Urgent" appointment slots were added into daily provider schedules to allow for same-day visits. Each disease team decided on a "centralized" vs. "decentralized" model for managing patient calls.

DEPARTMENTAL DATA

- Decentralized groups that booked the highest percentage of same day appointments reduced ED discharges to home.
- The department, as a whole, is successfully taking care of more of our patients in the ambulatory setting.
- Utilization of same day slots was low overall. There was a trend towards increased same day slots and decreased ED discharge as a percent of overall ED use.

DEISEASE TEAM EXAMPLES

<table>
<thead>
<tr>
<th>DISEASE TEAM</th>
<th>BREAST</th>
<th>GI</th>
<th>MELANOMA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call Center</td>
<td>Centralized</td>
<td>Started Centralized → Decentralized as of June 2019</td>
<td>Started Centralized → Decentralized as of April 2019</td>
</tr>
<tr>
<td>Percentage of Same Day Appointments booked March–June</td>
<td>1.92%</td>
<td>3.84%</td>
<td>2.33%</td>
</tr>
<tr>
<td>Pre Go Live</td>
<td>Total ED Encounters: 41</td>
<td>Total % discharged from ED: 61%</td>
<td>Total % discharged from ED: 28%</td>
</tr>
<tr>
<td>Post Go Live</td>
<td>Total ED Encounters: 47</td>
<td>Total % discharged from ED: 32%</td>
<td>Total % discharged from ED: 20%</td>
</tr>
<tr>
<td>% ↓ in ED encounter discharges to home:</td>
<td>↓ 29%</td>
<td>↓ 8%</td>
<td>↓ 19%</td>
</tr>
</tbody>
</table>

INNOVATION

- This program encourages patients to speak with a provider before utilizing the emergency department.
- This program will continue to evolve with the goal of keeping patients from seeking care in the Emergency Department when their care can be managed in alternative ways.

TEAM:

- Administration
  - Beth Souza, Judie Panagiatopoulou, Colleen Anderson, Kevin Lynch
- Quality and Safety
  - Therese Mulvey, Anne Chang Strickland
- Infusion Center (Yawkey B)
  - Julie Cronin, Laura Chambers White, Phil Saylor
- Leadership Team
  - Erika Rosato, Kellyann Jeffries, Roni Woods, Ephraim Hochberg
- Clinical Team
  - Brianne McGree NP, Sara Stevens NP, Jennifer Ackil NP, Mary McNeice NP, Michelle Knowles NP

REFERENCE:


This project was undertaken as a Quality Improvement Initiative at Massachusetts General Hospital, and as such was not formally supervised by the Institutional Review Board per their policies.
DEVELOPING A LUTATHERA TREATMENT PROGRAM IN AN AMBULATORY ONCOLOGY DEPARTMENT
Laura Chambers White, RN, MPH; Mimi Bartholomay, RN, MSN; Julie Cronin, RN, DNP, OCN; Julie Conlin, RN; John Opolski, RN; Shelia O’Donoghue, RN
Massachusetts General Hospital, Boston, MA

BACKGROUND/SIGNIFICANCE
- Lutetium Lu 177 Dotatate (Lutathera) was approved in 2017 to treat adults with somatostatin positive gastroenteropancreatic neuroendocrine tumors (GEP-NETS).
- Prior to approval patients had limited treatment options.
- Treatment with Lu-Dotatate resulted in increased progression free survival and a higher response rate than high dose Octreotide LAR in this patient population, allowing systemic radiotherapy to be delivered directly to tumor cells.

OBJECTIVES
- The purpose of this program was to design and implement a Lutathera treatment program in an ambulatory oncology department.
- Components to training included Lutathera overview, pretreatment work up, side effects, room preparation, treatment plan review, patient teaching, role of nuclear medicine and role of nursing.

WHAT IS LUTATHERA?
- Lutetium Lu 177 dotatate
- Approved (2017) for use in the US to treat adults with gastroenteropancreatic neuroendocrine tumors (GEP-NETs) that are somatostatin positive
- Systemic radiotherapy that allows the delivery of radionuclides directly to the tumor cells
- Infusion given q 8 weeks x 4 treatments with an Amino Acid infusion as a kidney protectant, and anti-emetics to manage nausea

SIDE EFFECTS
- Nausea & vomiting (primarily r/t amino acid infusion)
- Myelosuppression
- Hepatotoxicity (<1%)
- Renal Toxicity (<1%)
- Hypokalemia
- Infertility (permanent or temporary)
- Hyperglycemia
- Carcinoid Crisis (<1%)

THE LUTATHERA TREATMENT
- For neuroendocrine tumors with somatostatin receptors
- Radiopharmaceutical drawn into cell
- Targeted therapy or “PRRT”

ROOM PREPARATION
- Bedside table covered with plastic sheet for XRT work area
- Bathroom and Infusion room floors will be covered with plastic sheeting
- High touch bathroom surfaces and wall behind the toilet will also be covered with plastic sheeting
- Anywhere that could potentially be contaminated with urine gets plastic sheeting

PATIENT TEACHING
- Avoid close contact with people who live with them – try to keep a distance of at least 1 meter for 7 days after infusion
- Sleep in separate beds for first 4 days after treatment (3 feet apart)
- Toilets must be used in a seated position, even for men
  - Use toilet paper each time
  - Wash hands after to avoid contaminating door handles
- Strongly recommend to limit contact with children and pregnant women for 7 days after infusion.
- Drink plenty of fluids to help eliminate the Lutathera
- Wash underwear separate from other clothes for the first week
- Continue birth control for 7 months after last Lutathera TX if female, and 4 months if male
- No breast-feeding for 2 ½ months after final dose of Lutathera.

RADIATION SAFETY PRECAUTIONS
- Indicates potential hazard
- No pregnant staff without approval of Radiation Safety Officer (RSO)
- Do not enter room with sign (or comparable one) unless you have had Lutathera/Radiation Safety training
- Staff entering room will have radiation badges provided by RSO
- Radiation limits:
  - Occupational limit 5000 mrem/year
  - Public or Occasional limit 100 mrem/year
  - 1.6 mrem per case
- PPE: Chemotherapy PPE + booties
- Waste bins: Red waste bins
- ALARA – Keep exposure “As Low As Reasonably Achievable”

IMPLEMENTATION
- Program development involved a collaborative team including Nursing, Physician, Pharmacy, Nuclear Medicine, Radiation Safety and Administrative leadership across inpatient, ambulatory, oncology and emergency services.
- The process began with interdisciplinary meetings to review patient treatment criteria, patient flow, management and medication administration during clinical trials.
- Nursing education included an overview of disease pathology, specifics of medication administration, symptom management, a review of carcinoid crisis, treatment procedures and basic radiation safety teaching.
- Protocols were developed in collaboration with leadership from the emergency department (ED) to prepare for rapid patient transport in the event of carcinoid crisis or an ED visit after treatment.

PERFORMANCE IMPROVEMENT/OUTCOME
- Approximately one year following implementation, in total, 15 nurses were trained to care for patients receiving Lu-Dotatate.
- Over 30 individual patients have been treated with 75+ total treatments administered.

IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH
- Interdisciplinary collaboration and planning have allowed for a successful treatment program in an ambulatory care department.
- Treatment options continue to be evaluated for appropriateness and safety to be administered in the ambulatory setting.
- Ensuring proper training and preparation can facilitate successful implementation of programs such as Lutathera in an ambulatory setting.
IMPLEMENTATION OF A STANDARDIZED ELECTRONIC HANDOFF TOOL FOR ADVANCED PRACTICE PROVIDER PASS-OFF
Christopher R. Curtis, APRN-BC; Laura K. Andrews, PhD, APRN, ANCP-BC
Massachusetts General Hospital, Boston, MA

BACKGROUND
- The goal of this project was to implement a standardized electronic handoff tool for advanced practice providers (APPs) to use at the time of patient transfer to and from the Neurology Intensive Care Unit (ICU).
- A comprehensive literature review showed that there was minimal literature on handoff tools for APPs, and presently, there was no formal handoff process for patients transferring from a neurology ICU.
- It is estimated that there are approximately 210,000–255,000 deaths per year related to medical errors. Literature shows that 80% of medical errors are directly related to miscommunication by healthcare providers at the time of patient transfer.
- By standardizing communication, providers are able to communicate in a more concise manner, leading to a decrease in medical errors, preventable adverse events, sentinel events, healthcare spending, and an increase in provider satisfaction.

OBJECTIVES
The primary objective of this quality improvement project was to increase the rate of documentation by APPs using a standardized handoff tool for patients transferring from the neurology ICU. Secondary objectives include:
- Complete a comprehensive literature review.
- Implement a pre-project needs assessment of the APPs in both the neuro ICU and neurosciences floor.
- Implement the electronic handoff tool into the electronic health record for all neurosurgery patients transferring to and from the neuro ICU to the neurosciences floor.
- Evaluate APP satisfaction with the electronic handoff tool and new handoff process.

METHODS
- A comprehensive literature review was completed, to help guide the design and population of the electronic handoff tool.
- Prior to implementing the new electronic handoff tool, a needs assessment was electronically sent to the APP participants.
  - What is your current handoff process?
  - Are you satisfied with your current handoff process?
  - What is important to you in a handoff?
  - Implementation of the electronic handoff tool, which was completed between 12/01/2019–01/31/2020.
    - Each APP was provided with access to and education on the standard smart phrase.
    - Once the implementation was completed, a post-assessment was electronically sent to the participants.
      - Do you think the electronic handoff tool was an improvement over your previous handoff method?
      - How satisfied were you with the electronic handoff tool?
      - Do you think the handoff process should continue?

RESULTS
- The quality improvement implementation was implemented between 12/01/2019–01/31/2020.
- During that time there were:
  - 66 total handoffs completed.
  - 105 total neurosurgery patients were transferred.
  - 63% of neurosurgery patients transferred with completed electronic handoffs.
- Results from the post-implementation assessment:
  - 89% of participants were satisfied with the handoff tool.
  - 53% increase in satisfaction over previously used method.
  - 16% increase in satisfaction when compared to perception in pre-assessment.

PERFORMANCE IMPROVEMENT/OUTCOME
- Twelve APPs participated in the implementation.
- Of the 11 APPs who completed the pre-assessment, 65% were unsatisfied with the existing handoff process, and 73% felt that a standardized electronic tool would increase job satisfaction.
- During the implementation period, there was documentation using the electronic handoff tool for 66 of the 173 transfers (38%), involving 63% of all neurosurgery patients.
- Nine APPs completed the post-assessment, of which 8 (89%) felt extremely satisfied or some what satisfied with the handoff tool because they perceived improvements in care processes.

DISCUSSION/IMPLICATIONS FOR PRACTICE
- The implementation of an electronic handoff process resulted in improvements in APP satisfaction with the transfer process and in perceived improvements in patient care.
- This practice change has the potential to enhance communication between APP groups through standardization of processes and information.
- More investigation is required to determine its impact on mitigating medical errors.

REFERENCES:

This project was undertaken as a Quality Improvement Initiative at Massachusetts General Hospital, and as such was not formally supervised by the Institutional Review Board per their policies.
BACKGROUND

- Nurses play a critical role in healthcare
- Evidence supports nursing retention aligns with positive patient outcomes
- Critical care nurses are vulnerable to turnover
- Moral distress is linked to decreased job satisfaction
- Unit-specific full time RN turnover rate was 44.4% in 2018

PURPOSE

Create a culture of resiliency evidenced by a decrease in unit turnover and increase in satisfaction and moral distress

INTERVENTIONS

- Measure of Moral Distress Healthcare Professionals Survey
- Healthy Work Environment Assessment Tool
- Job Enjoyment and Satisfaction Survey
- Unit-Based Resiliency Rounds
  - A way for nurses to openly discuss experiences with moral distress, compassion fatigue, and burnout
  - Supported by Unit Leadership and Multi-Disciplinary Team, including the hospital Nurse Ethicist, Chaplaincy, and Social Work
  - Held twice monthly on the day shift and once monthly on the night shift
  - Designated unit champions facilitate communication and interventions
- RN Helper Role
  - A nurse who comes in to provide dedicated assistance to fellow nurses on the unit
  - Does not have a patient assignment
- Meaningful Recognition through a “Fishbowl”
  - Located at the nurse’s station and all staff can write positive experiences
  - Sent out in a weekly email

RESULTS

- Job satisfaction increased to 48.1% from 21%
- Frequency of moral distress decreased to 2.46 from 3.08
- Level of distress reported decreased to 3.13 from 3.42
- 69.6% staff reported resiliency rounds to decrease moral distress
- Unit RN turnover decreased to 18% for 2019

COST SAVINGS

Registered Nurse Turnover Cost (recruitment cost, onboarding, lost productivity): $52,100

<table>
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<th>Year</th>
<th>RNs</th>
<th>Turnover Cost</th>
<th>Total Cost</th>
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</tr>
</tbody>
</table>

Cost Savings after CSI Implementation: $781,500

IMPLICATIONS FOR FUTURE RESEARCH

- Moral Distress contributes to nurse turnover
- Interventions can decrease moral distress and increase retention

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BACKGROUND AND SIGNIFICANCE

A leading cause of mortality in the low resource setting is respiratory compromise of the newborn. Bubble Continuous Positive Airway Pressure (bCPAP) has been identified as an effective intervention for respiratory distress. Nurse-driven implementation of bCPAP in the low resource setting has not been well studied.

OBJECTIVE/LEARNING OUTCOMES

- Implementation of bCPAP in a Ugandan nursery through a nurse-driven multi model educational approach.
- Learning outcomes:
  1. Determine knowledge gain through written assessment pre/post lecture series
  2. Build bCPAP device as a multidisciplinary clinical team
  3. Properly assess newborns using the respiratory severity scale (RSS)
  4. Describe contraindications for bCPAP use
  5. Educate family/caregivers about the benefits and functioning of bCPAP

IMPLEMENTATION

Participant education:
- 38 clinical healthcare workers
- Pre assessment conducted prior to education to establish baseline knowledge
- Neonatal pathophysiology and physical assessment utilizing the respiratory severity scale (RSS) to determine eligibility for bCPAP
- Written exam conducted after education to evaluate comprehension of concepts
- Participants divided into multidisciplinary groups to assemble bCPAP devices using instructional materials
- Competency skills checklist used to assess accuracy of assembly
- At the completion of the course, assessments were administered and again at three months post intervention

PERFORMANCE IMPROVEMENT/OUTCOME

- Successful completion of the nurse driven didactic and practical sessions enabled learners to identify prospective patients who could benefit from bCPAP. Learners immediately identified four patients that met bCPAP criteria.
- Educational impact was demonstrated by ongoing incorporation of the RSS and physical assessment skills. Additionally, learners recognized contraindications to bCPAP and discontinued use appropriately.

Participant quotes from the 45 day post assessment survey:

Question: What are your thoughts on the use of bCPAP in the NICU?
- "It has greatly improved on the outcome of premature babies with Acute Respiratory distress syndrome"
- "It has helped on service delivery. Babies are no longer referred” “Such a helpful initiative"
- "It is really helping the neonates who need it"
- "After 8 months of bCPAP use, we had our lowest mortality rate of 7%, down from the previous month of 13%. This is the lowest we have ever had! Thank you and may we continue to work together for the better. Our target is less than 5%. We will get there."

Dr. Stella, Lead Pediatrician, February 8, 2020

IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH

Nurse driven education can be used to implement lifesaving therapies in low resource settings. Further research is needed to assess the educational impact on the sustainability of bCPAP and how this influences patient outcomes.

SPECIAL ACKNOWLEDGEMENT

This project was undertaken as a Quality Improvement Initiative at Massachusetts General Hospital, and as such was not formally supervised by the Institutional Review Board per their policies.
BACKGROUND AND SIGNIFICANCE

- The mortality observed-to-expected (O/E) ratio for a service line within our institution was higher than that of peer institutions.
- Risk-adjustment mortality outcomes are common metrics used in assessing hospital quality performance both internally and externally in rankings such as U.S. News Best Hospitals.
- One approach to improving risk-adjusted mortality outcomes is to ensure the accuracy of the expected rate by targeting specific comorbidities that may be under-captured when compared to peer hospitals.

OBJECTIVE

Increase the capture and coding of specific priority risk factors (ICD-10 secondary diagnoses) at or below the national median.

IMPORTANCE OF DOCUMENTATION

- Medical documentation of patient comorbid conditions is a primary factor that affects risk-adjusted mortality outcomes.
- The Elixhauser comorbidity index is a well-known and cited method of categorizing patient comorbidities based on ICD diagnosis codes.
- Use of Elixhauser has gained traction in national hospital quality circles as it is now a main factor within the US News risk adjustment methodology.

DIFFERENCES IN RISK MODELS

Example Risk Factors in 2020

Elixhauser comorbidities (secondary diagnoses), Base DRG, patient demographics, dual-eligibility, etc.

AHRQ CCS categories (ICD-10 diagnosis and procedure codes), patient demographics, admission source, etc.

"Clinically pertinent" ICD-10 diagnosis and procedure codes, patient demographics, admit source, payer, etc.

METHODS

- Analyze capture rates for Elixhauser comorbidities using Vizient Clinical Database for MGH and peer AMCs.
- Prioritize those with capture rates below the peer group median.

Example: Fluid & Electrolyte Disorders:

- MGH capture rate: 26%
- AMC median: 33%

- Create CDI Guide
  - Organized by body system
  - Grouped by Elixhauser comorbidity
  - Drill-down to ICD-10 diagnosis level
  - Priority risk factors flagged

- Increase CDI Team Education and raise awareness of these priority risk factors regardless of impact to revenue.

CDI PROCESS

- CDI reviews all lab results for abnormal findings. The nurse will send an electronic query to the physician in EPIC, requesting the documentation of appropriate diagnosis (e.g., hyponatremia, hypokalemia).
- All fluid and electrolyte priority risk factor diagnoses are entered into the CDI database.
- The CDS compares the final coded ICD-10 diagnoses against the database to ensure that all have been coded.

PROCESS MEASURES

Goal 1: Increase query rate from 12% to 15%

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<th>Feb-20</th>
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<tr>
<td>Queries</td>
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</tr>
<tr>
<td>Query Rate</td>
<td>12%</td>
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</tbody>
</table>

Goal 2: Increase agreement rate from 83% to 90%

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<tr>
<th>Metric</th>
<th>Baseline</th>
<th>Jan-20</th>
<th>Feb-20</th>
</tr>
</thead>
<tbody>
<tr>
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<td>83%</td>
<td>90%</td>
<td>83%</td>
</tr>
<tr>
<td>Total Agreement Rates</td>
<td>82%</td>
<td>90%</td>
<td>85%</td>
</tr>
</tbody>
</table>

PRELIMINARY RESULTS

CDI QUERY EXAMPLE

Patient name
MRN

The clinical documentation for patient name has prompted this request.

Please provide a corresponding diagnosis for the decreased sodium level.
("Hyponatremia", "Other explanation of clinical findings, please specify***", "Unable to clinically determine")

We are making this request because the medical record includes the supporting facts below:

Clinical Indicators:
3/17: NA 130
3/18 NA 131
3/19 NA 134

Risk Factors: hydrochlorothiazide, abnormal renal function

Treatment: Sodium chloride 0.9% bolus 500ml, Trending Sodium, Held ARB/HCTZ combo

Moving forward, please document in your progress note and/or discharge summary.

Thank you in advance,
CDI Specialist, RN

IMPLICATIONS

- Increased attention to capturing priority risk factors may be applicable for other service lines who seek to improve performance in risk adjusted mortality outcomes.
- Improved accuracy of expected rates ensure accurate evaluation in national public rankings of quality performance.

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Neuroprotective developmental care can be successfully implemented in more general pediatric care areas and are well-accepted by families and staff. Further studies are needed to determine if interventions improve clinical outcomes for these patients.

**IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH**

Neuroprotective developmental care is an evidence-based, best practice standard that uses comprehensive strategies to minimize negative effects of the hospital care environment to maximize patient and family outcomes. Classically associated with premature and critically ill hospitalized infants in the neonatal intensive care environment (NICU), neuroprotective interventions include things like controlling noxious external stimuli, safeguarding sleep, clustering nursing care, optimizing nutrition, and positioning and handling techniques to promote brain development. Family participation in these strategies through education, coaching, and mentoring is essential. Despite known benefits to infants in the NICU, neuroprotective care is not consistently integrated in more general pediatric care environments.

**BACKGROUND AND SIGNIFICANCE**

The primary purpose of this project was to promote developmental care practices, educate parents, families, and unit staff, and enhance individualized care through interdisciplinary discussion and care planning at the bedside.

**OBJECTIVES**

- A developmental care team consisting of a nursing practice specialist, registered nurse, occupational therapist, speech-language pathologist, physical therapist, child life therapist, and clinical providers was created to identify infants ages 0-6 months that transferred from the NICU or that would benefit from a neuroprotective developmental support.
- Weekly developmental care rounds at the bedside were implemented to integrate parents and enhance individualized infant care through interdisciplinary discussion and care planning.
- A developmental care plan tool was developed to consistently and systematically document recommendations and progress through interventions.

**RESULTS FOR PARENTAL SURVEY**

- “I have learned to have patience with my baby.”
- “How to do tummy time with a trach and G Tube.”
- “The Developmental Care Plan helped me teach my husband how to calm the baby.”

**PERFORMANCE IMPROVEMENT/OUTCOME**

Weekly developmental care rounds began on October 16, 2019 and are ongoing. To date, 22 infants have participated resulting in an aggregate of 72 individualized interventions. The most frequently recommended interventions are safe sleep, language stimulation, and tummy time. Anecdotally, nursing staff and families report increased knowledge of, confidence with, and practice of neurodevelopmental protective care.

**ACKNOWLEDGMENT**

We would like to acknowledge and thank all the families and nurses for their commitment and support to the development and implementation of this quality improvement project.
USE OF DEXTROSE GEL FOR INFANTS WITH HYPOGLYCEMIA AFTER 1 YEAR OF IMPLEMENTATION
Susan M O’Sullivan MSN RNC, Kim Francis PhD, RN, PHCNS-BC
Massachusetts General Hospital, Boston, MA

BACKGROUND AND SIGNIFICANCE
Hypoglycemia is one of the most common complications in the first 48 hours of life, which may have lasting neurological consequences if not treated properly. An Evidence Based Practice (EBP) team of staff nurses found strong evidence that use of glucose gel on the buccal mucosa is a beneficial treatment for infants with hypoglycemia. A quality improvement initiative was undertaken to implement the practice of using glucose gel for infants with hypoglycemia.

IMPLEMENTATION
We first obtained information about the practice from other institutions that had already implemented the gel, we obtained approval from various committees, added gel to our existing hypoglycemia algorithm, EPIC and the policy in ELLUCID and added the gel to the formulary.
Provider Education included:
• PowerPoints
• Demonstration with Feedback
• Flip books
• Show and Tell of Dextrose Administration
• Practice ordering and obtaining Gel in EPIC
Use of the glucose gel went live in June 2018.

PERFORMANCE IMPROVEMENT/OUTCOME
A 3-month evaluation pre/post glucose-gel demonstrated an 80% reduction in the requirement for PIV dextrose and admissions to a higher level of care as well as lower infant separation from mother. A 1-year review was then undertaken to see if the improvements with using glucose gel was sustained. During the post-gel period (May 2018 – August 2019), 34% of infants received gel and 4% required PIV as compared to the pre-gel period (April 2017 – April 2018) when 13% of infants required a PIV. In total, there was a 69% reduction in PIV dextrose during the 15-month post-gel period.

OBJECTIVES
Determine whether the application of glucose-gel to the buccal mucosa for hypoglycemia decreases infant-mother separation, need for peripheral intravenous (PIV), dextrose and admission to a higher level of care.

Provider Education included
PowerPoint Presentations

Glucose gel is administered buccally based on infant’s weight.

Hypoglycemia protocol with glucose gel added.

IMPlications for Nursing Practice and/or Future Research
Utilizing EBP to answer a nurse driven clinical question and initiating quality improvement strategies can have long term benefits for patients. Glucose gel continues to allow mothers and infants to remain together, decreasing unnecessary invasive procedures and decreasing length of stay by avoiding a higher level of care. Currently a cost analysis is underway to determine financial impact of gel use.

This project was undertaken as a Quality Improvement Initiative at Massachusetts General Hospital, and as such was not formally supervised by the Institutional Review Board per their policies.
IMPROVING DOCUMENTATION OF DELIVERY ROOM TEMPERATURES FOR “SMALL BABIES” BORN AT <32wks or ≤1500g
Megan Aurora, MD, Associate Medical Director and Neonatologist MGHfC NICU
Jeanne Gilbert, RNC BSN, Staff Nurse MGHfC NICU
JoAnne Riley, RNC BSN, Attending and Resource Nurse MGHfC NICU
MassGeneral Hospital for Children, Boston, MA

AIM
Amongst "small babies" born < 32 weeks or ≤1500g admitted to the Newborn Intensive Care Unit (NICU) from the Delivery Room (DR), we aimed to increase our percentage of documented DR temperatures from 23% to 80% by February 22, 2020 (4 months).

INTERVENTION
- PDSA cycle 1 (Early Oct 2019): Presented problem/baseline data/aim statement at department wide "PICNIC" meeting and resource nurse monthly meeting, as an initial “call for change”. Began process of updating the Thermoregulation Guideline of the VLBW on our CPG website Ellucid.
- PDSA cycle 2 (Late Oct 2019): Updated Thermoregulation of the VLBW Guideline approved and published on Ellucid. Additionally, based on diagnostic data from resource nurses, increased availability and standardized location of thermometers in the delivery rooms/resuscitation kits.
- PDSA cycle 3 (Oct/Dec 2019): Developed a SmartPhrase to use within our existing electronic medical record (EMR) to prompt nurses to document the delivery room temperature in their resuscitation note (see Figure 1). Resource nurses began using the SmartPhrase in October, NRTs (another group of delivery room nurses) began using a similar version in December.
- PDSA cycle 4 (Dec 2019): Placed laminated reminder cards on transport isolettes (see Figure 2).

RESULTS
Delivery room temperature documentation showed special cause variation after only 4 months of implementation of four PDSA cycles. By the end of Jan 2020, documentation was up from a median of 23% to 83%.

CONCLUSIONS
Using methods and tools already present within their current workflow, neonatal delivery room nurses were successful in improving delivery room temperature documentation from 23% to 80%.

TEAM:
- MGHIC NICU Resource Nurses
- MGHIC SCN NRTs
- MGHIC NICU Neonatologists

PROJECT SPONSORS:
- Serguei Roumiantsiev, MD, PhD
- Margaret Settle, RN, PhD, NE-BC

NEXT STEPS
With this improved system of documenting delivery room data, we will now have access to the information we need to make informed decisions regarding thermoregulatory policy changes in an effort improve outcomes for our smallest and most vulnerable patients.
- Begin to track/report delayed cord clamping time
- Begin to track/report proper use/placement of polyethylene wrap in the delivery room
- Begin to track/report proper use/placement of thermal mattress in the delivery room
- Begin to track/report NICU admission temperatures

This project was undertaken as a Quality Improvement Initiative at Massachusetts General Hospital, and as such was not formally supervised by the Institutional Review Board per their policies.
SIMULATION TRAINING: AN IMPORTANT TOOL TO IMPROVE STAFF RESPONSE TO EMERGENCY SITUATIONS IN THE AMBULATORY SETTING

June Guarente, MSN, RN, CGRN; Beth Nagle, MSN, RN, CHSE; Gail Alexander, MSN, RN, CCRN-K, CHSE; Sarah Hutchins, MSN, RN
Massachusetts General Hospital, Boston, MA

BACKGROUND AND SIGNIFICANCE

- Ambulatory procedural areas, such as the Endoscopy Unit at 165 Cambridge Street, are often supported by community vs hospital-based medical emergency response systems.
- It is imperative that staff working in ambulatory sites recognize and intervene at the first sign of patient deterioration.
- Recognizing this, MGH mandated semi-annual medical emergency drills with a debriefing as part of its Medical Emergency Response Plan.

OBJECTIVE

To provide a simulation-based learning experience to enhance the recognition and management of medical emergencies occurring during GI procedures in the ambulatory setting.

IMPLEMENTATION

- The Endoscopy Simulation Planning Committee including the Nursing Practice Specialist, staff nurses, and Knight Simulation Program staff collaborated to develop a 1-hour in-situ simulation program.
- Fifteen nursing and support staff including RNs, GI techs and PCAs participated in one of two sessions in which a simulated patient experienced a medical emergency.
- Staff worked together to manage the patient during this event.
- A CPR manikin, cardiac simulator, defibrillator and other supplies were used to create a realistic environment.
- The program was designed to provide an opportunity for staff to meet the following objectives:
  - Recognize early signs of over sedation and intervene
  - Follow ACLS guidelines in caring for the patient
  - Assume identified roles during the resuscitation
  - Recognize the need to contact EMS for the patient
  - Provide support to the family
  - Follow appropriate steps to transfer the patient to the ED
- The scenario was followed by a debriefing, which provided an opportunity for self-reflection, dialogue, and feedback.
- Participants completed a post-course survey. They rated the following four criteria using a Likert scale:
  - The patient scenario was realistic
  - The simulation enabled me to participate as if I was in a real medical emergency
  - I learned skills and behaviors that I can apply to future medical emergencies/codes
  - The simulation was a useful instructional methodology

PERFORMANCE IMPROVEMENT/OUTCOME

Ninety-three percent of participants "highly agreed" or "agreed" that the scenario was realistic, that it enabled them to participate as if they were in a real medical emergency and that they learned skills and behaviors that they can apply to future medical emergencies/codes.

Eighty-six percent of participants "highly agreed" or "agreed" that the simulation was a useful instructional methodology.

IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH

- Integration of simulation-based education provides an opportunity for staff to practice and strengthen the skills needed to provide an urgent and organized response to patient emergencies.
- The format can easily be adapted and used in other ambulatory and procedural settings.

This project was undertaken as a Quality Improvement Initiative at Massachusetts General Hospital, and as such was not formally supervised by the Institutional Review Board per their policies.
Heart Failure is a chronic progressive condition where the heart muscle is weakened. The heart pumps inefficiently causing fluid retention and hemodynamic compromise.

Tailored therapy
- Pulmonary Artery Catheters are used to measure the pressures in various parts of the heart to guide diuresis and titration of PO and IV vasoactive medications in order to optimize fluid balance and cardiac output.

Historically, the process for managing Heart Failure patients requiring tailored therapy with hemodynamic monitoring has required an ICU admission. To optimize treatment time, a decision was made to manage a select group of these patients on the Interventional Cardiology Unit. RNs on this unit had no prior experience using hemodynamic monitoring for tailored therapy. RNs are critical in identifying and addressing the risks associated with managing these patients.

Simulation education was part of a multimodal program used to prepare staff for this change in practice. The comprehensive education program also included didactic learning, 4 hour hands-on precepted experience, caring for a patient with a pulmonary artery catheter, in the ICU and/or procedural areas and on-unit waveform interpretation practice skill sessions.

**OBJECTIVES**

The RN will demonstrate understanding of the care and collaborative management of Heart Failure patients requiring invasive hemodynamic monitoring.

**IMPLEMENTATION**

- Clinical Nurse Specialists and subject matter experts collaborated to develop and implement a 4-hour simulation program.
- Forty-five RNs participated in seven simulation sessions.
- The scenarios were followed by a faculty-guided debriefing providing an opportunity for dialogue, identification of knowledge gaps, and feedback.

**CASE SCENARIOS**

- Five simulation scenarios provided nurses the opportunity to: practice using systems to measure hemodynamics, integrate patient assessment findings with hemodynamic data, and troubleshoot issues and complications.
- In each scenario, nurses cared for a simulated Heart Failure patient with a pulmonary artery catheter. Scenarios focused on different skills and knowledge including:
  - Start of shift patient assessment integrating equipment check and hemodynamic pressure measurement.
  - Responding to spontaneous catheter migration into wedge position.
  - Collaborative care of patients with non-sustained ventricular tachycardia, hypotension, and worsening renal failure.

**Nurses said:**
- "I will certainly apply all of this to my patient care."
- "I will apply what I learned today in all patient care associated with PA line and continue to learn from my colleagues as time goes on."
- "More confident delivery of care."
- "Having better understanding of the care of patients with PA line."
- "Know what information to have at hand prior to contacting the provider."
- "Faculty and teaching methods are very helpful and knowledgeable."
- "Very good sim lab discussion, opportunity to ask many questions too."
- "The debriefing was very helpful."
- "Having Ellison 11 CNSs as well as Blake 8 CNS was very helpful!"

**PERFORMANCE IMPROVEMENT/OUTCOME**

- All RNs completed a course evaluation and reported that the program addressed the learning outcome, enhanced their current knowledge base, would help them to improve patient care, and provided new ideas or information they expect to use.
- In response to faculty observation and participant feedback, the program was revised to include a skill station and additional scenario. The skills station allowed all participants to practice drawing a simulated mixed venous oxygen saturation blood sample. A sixth scenario focused on the care of a patient who decompensates after an inotropic infusion is weaned.

**IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH**

- Simulation is powerful instructional tool to consider using when implementing a practice change.
- It provides a learning opportunity for staff to gain knowledge and experience in a simulated patient care environment.

This project was undertaken as a Quality Improvement Initiative at Massachusetts General Hospital, and as such was not formally supervised by the Institutional Review Board per their policies.
BACKGROUND AND SIGNIFICANCE

- Research has shown that early exposure to some highly allergenic foods may help protect children over the long term through allergen desensitization and help them to expand their diets.
- Outcomes of Early Allergen Introduction is an infant/toddler food allergy research study, which involves food challenges to explore trajectories of the infant/toddler allergic responses.
- Historically, nurses documented patient reactions on paper flowsheets which proved problematic for data collection and analysis.
- The Food Allergy Flowsheet in Epic did not sufficiently capture the range of the infant/toddler allergic responses.
- Without an electronic age-appropriate mechanism for data collection, evidence-based standards of care could not be developed.

IMPLEMENTATION

- Research nurses, the food allergy study team and MGH eCare worked collaboratively to create an infant/toddler food allergy flowsheet in Epic.
- Training for nursing consisted of shadow charting, testing scenarios and at the elbow support.

PERFORMANCE IMPROVEMENT/OUTCOME

- A nursing education tool evolved from the terminology and definitions used to describe allergic reactions.
- The use of targeted nursing assessments resulted in an expanded understanding of trajectories and timelines associated with the infant/toddler allergic responses.
- Comprehensive data analysis and improved data integrity were facilitated by structured, consistent, and systematic documentation.
- Patient safety was improved by the consistent language and heightened awareness that the careful documentation populating the flowsheet is the data.
- Accurate interpretation of infant/toddler allergic reactions was enabled by the systematic review of food allergy symptoms.
- Data became usable, allowing for ease of entry into Redcap for analysis and for promoting safer patient outcomes.
- Improved team communication developed.

OBJECTIVES

The purpose of this quality improvement project was:
- to streamline nursing documentation of infant/toddler allergic responses during food challenges
- to improve accuracy of data collection during infant/toddler research food challenges by capturing more detail for future analysis

IMPLICATIONS FOR NURSING PRACTICE

- Establishment of evidence-based standards of care for infants and toddlers with food allergies.
- Potential model for future research to streamline documentation of food challenges in older children and adults.
- Expand use of electronic documentation tools in clinical research nursing.

This project was undertaken as a Quality Improvement Initiative at Massachusetts General Hospital, and as such was not formally supervised by the Institutional Review Board per their policies.
A PILOT OF EMERGENCY DEPARTMENT-INITIATED BUPRENORPHINE FOR OPIOID WITHDRAWAL AND OPIOID USE DISORDER: A QUALITY IMPROVEMENT PROJECT

Jason R. Lucey, DNP, FNP-BC; Kerry Nolte, PhD, FNP-BC; Kellie Mueller, Med; Stacey Savage, MSN, RN, CPEN, CEN; and Lukas Kolm, MD, MPH, FACEP
Massachusetts General Hospital, Boston, MA

BACKGROUND

Emergency department (ED) visits for opioid problems are common. Buprenorphine is evidence-based therapy for opioid use disorder (OUD). To track process, one must recruit/train staff on process. To recruit/train cohort of staff on process in a clinical setting, is wrapping appropriate medication. To ensure appropriate prescribing, training is essential. Medication training is critical in improving adherence to treatment protocols. Medication training is critical in improving adherence to treatment protocols. This project created access to buprenorphine where it was unavailable before. A majority of MD’s became waivered, well above the target to sustain innovation. Odds of better patient outcomes are improved. Despite limitations in data accuracy, lessons learned may be useful to other organizations. Future analysis including statistical process control measures and health record data collection will be valuable.

OBJECTIVES

1) To develop a pilot process providing ED buprenorphine for opioid withdrawal or treatment of OUD.
2) To recruit/train cohort of staff on process.
3) To track process.

PERFORMANCE IMPROVEMENT OUTCOMES

Guidelines were vetted/approved. Sixty percent of full-time ED MD’s obtained DEA waivers to prescribe buprenorphine. Trainings were provided. In first month, 16 unique case reports were collected. High adherence to most process steps were seen: Opioid withdrawal scales (COWS) performed, buprenorphine administered for COWS score ≥ 8. Discharged with prescription after ED discharge, home induction for COWS ≤ 8, discharged with prescription provision. Lower adherence was noted for recovery coaching involvement and overdose education/naloxone provision.

IMPLEMENTATION

Using national/regional guidelines, a process for ED-initiated buprenorphine was developed through stakeholder meetings. Using a Diffusion of Innovation model, a staff cohort was trained. Buprenorphine waiver training was facilitated. Trainings were conducted. Case reports were completed.

IMPLICATIONS

This project created access to buprenorphine where it was unavailable before. A majority of MD’s became waivered, well above the target to sustain innovation. Odds of better patient outcomes are improved. Despite limitations in data accuracy, lessons learned may be useful to other organizations. Future analysis including statistical process control measures and health record data collection will be valuable.

REFERENCES


2019 Consensus Report conclusion: Failure to offer medications for OUD in any care setting is unethical.

Medication-based treatment is effective across all treatment settings studied to date. Withholding or failing to have available all classes of FDA-approved medication for the treatment of opioid use disorder in any care or criminal justice setting is denying appropriate medical treatment.

Special thank you to:

WENTWORTH-DOUGLAS HOSPITAL
University of New Hampshire

This project was undertaken as a Quality Improvement Initiative at Massachusetts General Hospital, and as such was not formally supervised by the Institutional Review Board per their policies.
EMPOWERING NURSES TO INCORPORATE THE SERIOUS ILLNESS CONVERSATION FRAMEWORK INTO REGULARLY SCHEDULED PATIENT-CENTERED CARE CONFERENCES DURING AN INPATIENT ONCOLOGY ADMISSION

Olivia Marshall, RN, BSN, Francesca Miceli, RN, BSN and Natalie Rosenlieb, RN, BSN, CHPN
Massachusetts General Hospital, Boston, MA

BACKGROUND/SIGNIFICANCE
Advance care planning (ACP) conversations do not occur on a scheduled basis in the inpatient adult oncology setting. Evidence shows that these conversations occur late in the trajectory of a patient’s cancer diagnosis as the patient nears end-of-life, ultimately leading to high-stress goals of care meetings. Early conversations allow for high-quality, goal-concordant care and promotion of patients’ quality of life throughout the course of serious illnesses. Often when discussions take place, there is inconsistent documentation in the electronic health record (EHR) that would allow the information to be referenced by all members of the healthcare team. Inpatient oncology nurses have a unique role in facilitating and encouraging ACP. Nurses are central to supporting consistent communication and understanding within the patient’s care team. Research conducted in critical and palliative care settings shows that nurses report barriers for participating in or conducting advance care planning (ACP) conversations include a lack of empowerment and understanding of their scope of practice.

PURPOSE
Implement standardized, nurse-led patient-centered care conferences to
1. Provide education to nurses with a goal of increasing nurse empowerment.
2. Improve consistency and content of ACP discussions with oncology patients, their families, and the inpatient oncology healthcare team.
3. Increase consistency of EHR ACP documentation and completion of advance directives.

INTERVENTIONS
• Inpatient Oncology Registered Nurses (RNs) were given a pre- and post-intervention survey to assess knowledge and feelings of empowerment utilizing Gretchen Spreitzer’s Psychological Empowerment Tool.
• Multiple educational sessions provided to discuss RN scope of practice, scheduled ACP meetings and documentation held throughout October 2019 for nurses to attend. An email with a slide show and video was sent out to nurses for all of those who were unable to attend educational sessions.
• Nurse directed patient-centered care conferences were to occur within 72 hours of admission and continue at 96-hour intervals utilizing an evidence-based framework, the Serious Illness Conversation Guide (SICG).

IMPLEMENTATION PROCESS
• Pre-intervention EHR review conducted monthly (July 2019–October 2019) to assess baseline SIC documentation by RNs
• Bi-weekly EHR review throughout intervention period (November 2019–February 2020)
• Educational sessions held in October 2019 and individual education as needed throughout intervention
• “Tip sheets” posted to each computer at nurses’ station
• Reminders to RNs during daily morning safety huddle
• Memes placed around unit to encourage participation

OUTCOMES
• 4 out of the 14 conversations (28.5%) were documented within 72 hours of patient admission prior to intervention.
• 27 out of 74 conversations (36.5%) were documented within 72 hours of patient admission post intervention.
• 61.1% of the surveyed nurses agree that using the term “patient-centered care conference” makes it easier to approach conversations with patients and their families regarding their serious illnesses.

ACKNOWLEDGEMENTS:
We would like to thank the Reich Fellowship for funding this Quality Improvement project and the Continuum Project for inspiring our research. We would also like to thank our mentors, Heather Carlson, APRN-BC, Meg Soniano, RN, MBE, Barbara Cashavelly, RN, DNP, NE-BC, Marianne Ditomassi, RN, DNP, MBA, NEA-BC, FAAN, and Debra Burke, RN, DNP, MBA, NEA-BC, along with the Palliative care team at Massachusetts General Hospital.

REFERENCES:

NUSING IMPLICATIONS
• Oncology nurses should feel empowered to lead ACP conversations with their patients and may use the Serious Illness Conversation guide to help facilitate dialogue.
• Utilizing the phrase “Patient-Centered Care Conference” instead of “Goals of care” or “Family meeting” may improve frequency and quality of Serious Illness Conversations.
• Nurses can contribute valuable information to ensure goal-concordant patient care and serve as leaders on the patient’s care team.

NEXT STEPS
Next Steps to Promote and Maintain Empowerment for Nurse Led Conversations:
• Build education into new hire orientation for new graduate oncology nurse residency program at MGH.
• Add Serious Illness educational tool to competency for new hires with previous nursing experience.
• Build in reminder for Serious Illness Conversations into Work List and Admission Navigator: Nurses will be prompted with option to document conversation or to defer, as clinically indicated.
• Engage Attending RN to incorporate a review of the “Last Documented SIC” into daily morning rounds with patient care team.
• Provide additional and continued unit-based education to staff nurses.

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AIM STATEMENT

PURPOSE:
- Reduce anxiety and distress in newly diagnosed GI oncology patients before initiating active treatment

WHEN/HOW WILL IT TAKE PLACE:
- Three month period of time from June 1 – October 1, 2019
- Mechanism for direct communication by phone with a GI oncology nurse practitioner
  - Answer questions
  - Provide support
  - Initiate interventions to support services
- Utilize screening tools to measure anxiety and distress pre and post-intervention
- Measure patient satisfaction at the end of the QI project

MEASURING SUCCESS:
- Patient’s will demonstrate a 25% reduction in anxiety with the telephone interventions during their gap period.
- Patient’s will demonstrate a 25% reduction in distress with the telephone interventions during their gap period.
- There will be no (0%) patient unable to sign informed consent at the start of care because of anxiety or distress.
- There will be a 90% patient satisfaction rate with the telephone communication process.

BACKGROUND

Anxiety and distress can
- reduce a patient’s quality of life
- impact their capacity to make important medical decisions
- reduce their desire to follow through with treatment regimens
- effect their family and work relationships,
- can cause depression and risk of self-harm,
- incite unnecessary side effects from medications
- shorten overall survival

METHODS

Anxiety
- PROMIS (Patient Reported Outcome Measurement Information Systems) anxiety short form

Distress
- NCCN (National Cancer Care Network) Distress Thermometer and screening problem list

Patient Satisfaction
- PSCC (Patient Satisfaction with Cancer Care) evaluation of satisfaction from screening to diagnosis and treatment

RESULTS

PRE/POST INTERVENTION

ANXIETY SCORES

<table>
<thead>
<tr>
<th>T score</th>
<th>PRE</th>
<th>POST</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;50 (NL)</td>
<td>n = 5 (31.3%)</td>
<td>n = 2 (12.5%)</td>
</tr>
<tr>
<td>50-60 (MILD)</td>
<td>n = 4 (25.0%)</td>
<td>n = 3 (18.8%)</td>
</tr>
<tr>
<td>60-70 (MOD)</td>
<td>n = 1 (6.3%)</td>
<td>n = 0 (0%)</td>
</tr>
</tbody>
</table>

DISTRESS SCORES

<table>
<thead>
<tr>
<th>Distress Score</th>
<th>PRE</th>
<th>POST</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>n = 16 (100%)</td>
<td>n = 16 (100%)</td>
</tr>
<tr>
<td>6-10</td>
<td>n = 16 (100%)</td>
<td>n = 16 (100%)</td>
</tr>
</tbody>
</table>

Additional Positive Outcomes:
- No treatment postponements due to anxiety
- 10 patients received early intervention Social service consultations
- 8 patients received early intervention Nutrition consultations
- 2 patients received early intervention Psych- oncology consultations
- 0 patients required hospitalization due to side effects at Week 1 toxicity check
- 0 patients requiring additional management of side effects at Week 1 toxicity check

Patient Satisfaction Data:
- 50% return rate on surveys
- Overall high satisfaction with the telephone calls
- "Phone calls were very informative"
- "I didn’t feel as anxious after I talked to the NP"

DISCUSSION

Additional Positive Outcomes:
- This project was effective in demonstrating a statistically significant reduction in anxiety scores and improved distress scores
- There was a high degree of patient satisfaction with the phone call communications
- Reduced anxiety and distress can improve treatment adherence which is linked to patient satisfaction
- Treatment adherence can prevent side effects and reduce hospitalizations and was demonstrated in this QI project

CONCLUSION

Future Research

- Larger scale study that examines a control vs intervention group to determine effect of phone calls on a more diverse group of GI cancer patients
- Further examine the relationship between the telephone communications, improved treatment adherence and reduced side effects.

ACKNOWLEDGEMENTS

This project was supported and mentored by Dr. Gene Hankless, DNSc, APRN, FNPN-BC, CNE, FAANP, Associate Professor at the University of New Hampshire and Dr. Ryan Nipp, GI Oncologist at Massachusetts General Hospital, in Boston, MA

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**BACKGROUND AND SIGNIFICANCE**

Lira University is currently Uganda’s only bachelor’s-prepared midwifery program, and aims to become a beacon of high-quality maternal and newborn care. However, the low-resourced region struggles with recruitment and retention of providers, and student midwives receive little mentorship in the clinical setting. Due to this, students lack confidence in their abilities to perform skills such as normal deliveries and emergency obstetrics management, resulting in preventable maternal and neonatal morbidity and mortality. To improve these outcomes, faculty at Lira University partnered with MGH Global Nursing to provide preceptor support for students during their clinical rotations.

**OBJECTIVE/LEARNING OUTCOMES**

The goal of the partnership between MGH and Lira University was to improve the quality of Lira’s midwifery education by modeling and reinforcing key principles of clinical preceptorship and evidence-based care. Learning outcomes included:

1. **Perform safely and competently in the labor and delivery suite**
   - a) Demonstrate the ability to accurately complete and utilize partograph tools to inform patient care
   - b) Document and interpret history and physical exams, including vital signs, vaginal exams, and normal and abnormal assessment findings
   - c) Display observed improvement in key midwifery competencies and clinical skills
   - d) Provide thorough verbal and written patient handoffs during both routine change-of-shift and urgent/emergent situations

2. **Demonstrate understanding of normal versus abnormal labor and delivery**
   - a) Respond appropriately to low, medium, and high risk clinical findings
   - b) Interpret vital signs correctly
   - c) Consult with interprofessional team members in a timely manner for abnormal labor progress and obstetric emergencies
   - d) Respond with proficiency and due urgency to emergencies as presented in case studies and clinical scenarios

3. **Conduct thorough patient histories and physical assessments for postpartum mothers and neonates in the home setting**

**IMPLEMENTATION**

Over a two-week period, formal lectures were conducted for forty 3rd-year midwifery students and two assistant faculty members, introducing the concepts of SOAP notes, delivery notes, and verbal and written handoffs. The certified nurse-midwife Global Nursing Fellows also served as clinical preceptors for thirty-two 3rd-year midwifery students, who had the opportunity to apply lifesaving skills in the intrapartum and postpartum settings.

**PERFORMANCE IMPROVEMENT/OUTCOME**

Student midwives were precepted during one hundred postpartum home visits and fifty spontaneous vaginal deliveries of singleton and twin newborns in cephalic and breech presentations. Students verbalized increased comfort in the clinical setting after the intervention. After two weeks, over 90% of student midwives accurately utilized partographs for clinical decision-making and could correctly demonstrate how to safely manage obstetric emergencies. By the end of Postpartum Day Seven, all thirty-two students appropriately performed over 90% of the maternal and newborn postpartum exams.

**IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH**

Clinical preceptorship clearly improves midwifery students’ skills, engagement, and confidence in labor and postpartum management. Additional educational interventions are indicated to address faculty knowledge gaps with regards to the principles of adult learning, and to best support clinical staff and students at Lira University.

**SPECIAL ACKNOWLEDGEMENT**

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BACKGROUND

- Stage IV Gastrointestinal Cancers frequently have a limited prognosis of 1-2 years. In the absence of serious illness conversations (SIC) and advanced care planning (ACP), this population of patients are often the recipients of crisis driven, aggressive care at the end of life.
- Unfortunately, less than a third of patients with metastatic gastrointestinal cancers reported a SIC with their clinician upon diagnosis or at the first oncology visit.
- We aimed to train providers on serious illness communication. This helped providers have deeper quality and meaningful conversations with their patients.
- The goal in training clinicians would diminish anxiety around initiating these emotionally difficult conversations.
- Provider communication skills around advanced care planning can help guide patients and their families to ask appropriate questions. This could open the door for meaningful, goal focused dialogue and improved outcomes for patients and their families.

PURPOSE

To describe provider experience (oncologists and oncology nurse practitioners) with the conversation guide and understand facilitators and barriers to implementation of advanced care planning.

METHODOLOGY

- We conducted interviews with 5 clinicians (oncologist and oncology NP) providing care to GI Cancer patients in an academic medical center.
- Interviewed clinicians to understand their perception of the serious illness conversation training and its subsequent use in clinical practice. Also gathering impressions of barriers and facilitators to implementation.
- Feedback recommendations for future implementation for all disease centers.
- We transcribed all the interviews.
- Two coders independently reviewed the qualitative interviews and categorized the data into broader issues and themes.

RESULTS

<table>
<thead>
<tr>
<th>Positive Perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Framework:</td>
</tr>
<tr>
<td>&quot;Loved the training, thought it was great. Loved that there was a structured script to use. This training will change practice by giving me more confidence to continue the conversation.&quot; (NP and MD)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Negative Perceptions</th>
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</thead>
<tbody>
<tr>
<td>Training:</td>
</tr>
<tr>
<td>&quot;During clinic time less than ideal, the burden of having to be away from a clinic on a clinical day was difficult.&quot; (NP)</td>
</tr>
<tr>
<td>Role play anxiety:</td>
</tr>
<tr>
<td>&quot;There was anxiety around having to share the space with peers and being watched and judged.&quot; (MD)</td>
</tr>
</tbody>
</table>

| Logistics of using the guide: |
| Not knowing where to find it in the days following the training was not intuitive. (NP) |
| Clinic demands and being away from patient care. (MD) |
| Too hypothetical to use script in clinical practice. (NP) |
| "Least helpful, role playing and having to use an actual formalized script provided to us." (NP) |

| Facilitators |
| 1. Taking responsibility for early prognostic exposure. "More initiative from the MD about prognosis would allow the invitation to use it more." (NP) |
| 2. Enhancing documentation quality throughout the trajectory. "Documentation quality is excellent and should be available for every patient in each visit." (NP) |
| 4. Financial incentive. (MD) |
| 5. Easy workflow. |

| Barriers |
| Patient reluctance. |
| Logistics of integration into the workflow. |
| Patient fear and clinician discomfort in imitating these conversations. |
| Concern about documentation would impact acute decision making “You do not want the module to be the decision maker for your patients, still want to be the primary oncologist that can share in decision making.” (MD) |
| Time constraints to having the conversations. |

SUMMARY

The aim of this project was to elicit behavior change in an area of healthcare that is in desperate need of improved communication. Training GI Oncologists and GI Oncology Nurse Practitioners has helped uncover a fragmented process for taking care of the seriously ill and often terminally ill cancer patient. Often the philosophy/goal is to follow a path to cure disease and along the way the patient’s wishes, goals and hopes become disconnected from treatment planning and goal concordant care is sidelined.

IMPLICATIONS FOR FUTURE RESEARCH

- These findings help illustrate clinicians lack of communication training, which intern affects patients with advanced GI cancers to have exposure to highly medicalized care at the end of life.
- Studying when to implement these conversations and how to integrate them into the workflow from the initial consultation.

Special thank-you to:
GI Oncology Nurse Practitioners and Oncologists

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**BACKGROUND AND SIGNIFICANCE**

- Early mobilization of patients may decrease hospital length of stay and iatrogenic complications related to immobility.
- Due to competing priorities and varying levels of knowledge and motivation, mobilization of patients may be overlooked on general medical units.
- On one general medical unit, it was noted that nurses did not prioritize the mobilization of patients.
- The unit had no standard to document a patient’s mobility status in the electronic medical record.

**PURPOSE**

1. To increase knowledge of nurses in the importance of mobilizing patients.
2. To address the barriers that prevent nurses from mobilizing patients.
3. To impact hospital length of stay through engagement of nurses and patients/families in mobilization.

**IMPLEMENTATION**

- Pre and post survey on barriers to mobilizing patients
- Educational sessions on safe mobilization practices were given by physical therapists
- A unit-specific documentation guideline was implemented

![Bigelow 11 Average LOS](chart1)

![On a scale of 0 to 10, please identify how you prioritize mobilizing patients during your shift (0 you do not prioritize; 10 you prioritize it greatly):](chart2)

- **Pre Project**
  - 6.4
- **Post Project**
  - 7.3

![Documentation of “Activity as Tolerated” in Electronic Medical Record EMR](chart3)

**IMPLICATIONS**

- Replicated in hospital on a larger scale
- The effects of early and frequent mobilization may influence pressure ulcer rates, fall rates, quality of sleep, delirium and quiet at night scores

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This project was undertaken as a Quality Improvement Initiative at Massachusetts General Hospital, and as such was not formally supervised by the Institutional Review Board per their policies.
Medical simulation is an incredibly valuable learning tool. Many opportunities exist for simulation training on the main campus. However, those simulation courses do not address emergency preparedness within a free-standing ambulatory care center. Therefore, we created and implemented a quarterly program including different real-life scenarios enhancing role clarity to prepare staff in emergency situations.

**BACKGROUND**

Simulation training was implemented in the ambulatory surgical unit over the past year. Offered quarterly, it focused on emergency scenarios such as malignant hyperthermia, myocardial infarction, vascular emergencies, and local anesthetic toxicity. A Likert-scale and open-response survey was created specifically for this training and used to assess participant’s experiences in the program.

**OBJECTIVES**

The goal of this simulation intervention was to enhance closed-loop communication and debriefing, improve teamwork, define roles and familiarize staff with emergency preparedness and emergency equipment at an outpatient setting.

**IMPLEMENTATION**

Simulation training was implemented in the ambulatory surgical unit over the past year. Offered quarterly, it focused on emergency scenarios such as malignant hyperthermia, myocardial infarction, vascular emergencies, and local anesthetic toxicity. A Likert-scale and open-response survey was created specifically for this training and used to assess participant’s experiences in the program.

**PROGRAM FEEDBACK**

**Question:** Please comment on the strengths and weaknesses of the session, and share any suggestions for program improvement.

**Response:** “I thought the entire program was strong. It not only sharpened professional skills, but emphasized the importance of proper communication between team members, which in the heat/stress of a crisis, that important aspect can get lost. It was great and I was so happy I went.”

**PERFORMANCE IMPROVEMENT/OUTCOME**

Survey responses of participants indicated a knowledge gap of the location for emergency response equipment, which led simulation trainers to create and implement a scavenger hunt. During the debriefing sessions, staff stated they had better understanding of role clarity and closed-loop communication technique, because of practice during the simulation training. Staff reported an increased comfort level with utilizing these techniques in their daily practice. Participant responses on the Likert-scale stated that the simulation experience enhanced teamwork and communication skills by improving their knowledge and awareness of discipline-specific roles and responsibilities. The simulations included clinical review of commonly encountered patient emergency situations in our satellite ambulatory care center. Staff stated an increased clinical knowledge of commonly encountered patient emergency situations and an improved comfort level when the emergency arises.

**IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH**

Future analysis will include data on patient outcomes. Given the positivity from the staff, the next step is to measure the response time of an emergency situation. Staff identified further need to improve their comfort level of IV placement, defibrillator usage, and code cart stock familiarity in an emergency.

**CREATION AND IMPLEMENTATION OF A SIMULATION-BASED TRAINING EXPERIENCE TO INCREASE STAFF MEMBER EMERGENCY PREPAREDNESS AT A SATELLITE AMBULATORY CARE CENTER**

Kim Walker, RN, BSN; Mary Chiulli, RN, BSN, MM; Josette Renda, RN, MSN; Stephanie Guerriero, Pharm D; Rebecca Minehart, MD, MSHPEd; Mark McKeen, MD

Massachusetts General North Shore Center for Outpatient Care, Danvers, MA

This project was undertaken as a Quality Improvement Initiative at Massachusetts General Hospital, and as such was not formally supervised by the Institutional Review Board per their policies.
SIMULATION TO ENHANCE NURSES’ PROFICIENCY IN CARING FOR PATIENTS WITH ECMO: A PILOT QUALITY IMPROVEMENT INITIATIVE

Kathleen Schultz, RN, DNP, AGACNP-BC; Ivana Nikolic, MD; Maureen Hemingway, RN, DNP, CNOR; Emil Petrusa, PhD
Massachusetts General Hospital, Boston, MA

BACKGROUND AND SIGNIFICANCE

Extracorporeal membrane oxygenation (ECMO) is an advanced, life-saving treatment that uses a pump to circulate blood through an artificial lung providing oxygenation to the body. Patients requiring ECMO have severe, life-threatening illnesses that prevent their heart and/or lungs from functioning normally. Nurses caring for ECMO patients must be prepared for routine and emergency situations; rapid, accurate responses to emergency situations involving complex technology require regular practice. Therefore, we sought to develop high-fidelity simulation training to better promote and maintain the relevant clinical skills required for ECMO.

METHODS OF MEASUREMENT

- Developed quiz questions
- General and specific knowledge assessed
- Vetted by ECMO Nurse Experts
- Demographics Survey
- KSA Survey

ECMO Quiz: Hypovolemia (4)
1. Which of the following is a common sign of hypovolemia in VA ECMO?
   a. Hypertension
   b. Increased CVP
   c. Shallow
   d. Increased Sat02
2. If the positioning of the venous cannula is confirmed to be in the correct place, what is the most common cause of a low flow alarm?
   a. Return cannula too large
   b. Hypovolemia
   c. Kinked tubing
   d. Thrombus formation

After participating in the simulations, how do you feel your management of emergency situations has improved?
Not At All — Low — Slightly — Neutral Moderately — Very — Extremely

PRELIMINARY RESULTS

20 nurses participated with an average pretest score was 80.7, average posttest score was 87.1 for the educational standard, 82.8 following simulation. Staff expressed positivity toward this experience and requested extension of the program to a full-scale initiative. A two-tailed, paired t-test was not statistically significant when comparing all data sets, likely due to the small sample size but did show a significant relationship (p < .05) between the first pilot simulations and after PDSA adjustments were made. The first PDSA developed take-away points for the final debriefing. The second PDSA cycle clarified exam questions to more accurately reflect knowledge rather than test taking abilities.

DISCUSSION

- ECMO simulation for bedside nurse re-education is feasible
- Statistical significance not achieved for aggregate test scores
- Staff perception tremendously positive
- Limitations:
  - Small sample size
  - Variability in confederates attending simulation
  - Time commitment of simulation design and implementation
  - Unable to acquire a simulation ECMO circuit

IMPLICATIONS

- Pilot simulation training demonstrated increased knowledge of nurses in caring for patients on ECMO
- Further assessment is indicated to determine whether this program improves clinical outcomes or decreases complications in patients receiving ECMO
- Simulation program is feasible
- Technology and finance in place
- Supports the institutional goal of ELSO platinum status
- Full roll out of adapting simulation into retraining is to be determined
- Dedicated staff is imperative
- Better time to roll out

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BACKGROUND

- In 2015, MGH received federal designation as the New England Regional Ebola and other Special Pathogens Treatment Center for patients who have or are suspected of having high consequence infectious diseases (HCIDs).
- The lack of a care team and limited availability of policies, procedures and training recommendations to support safety and efficacy was acknowledged.

OBJECTIVE

To develop an interdisciplinary team, the Biothreats Response Team (BRT) and the requisite policies and procedures to safely and effectively care for patients with confirmed or suspected HCIDs.

IMPLEMENTATION

- Team recruitment commenced in March of 2016.
- A volunteer model was established and was comprised of experienced staff from the Medical ICU and the Pediatric ICU including registered nurses (RNs), attending physicians (MDs), and respiratory therapists (RTs).
- Team members worked with staff from Emergency Preparedness, Infection Control, Laboratory, Environmental Health and Safety, and Materials Management to establish policies, procedures and training materials.
- Drills were held to test and refine the newly created documents.

PERFORMANCE IMPROVEMENT OUTCOMES

Team Membership
- Presently, there are 157 team members, including auxiliary members; recruitment is ongoing.
- The clinical team is comprised of 54 RNs, 20 MDs, and 17 RTs.
- A retention rate of ~80% is observed among the clinical team over a 3-year period.
- Attrition in team members is mainly due to changes in role within the organization and change in employment status.
- Anecdotal evidence suggests high satisfaction among team.

Team Trainings
- Team trainings and exercises allowed staff to come together and learn across disciplines and specialties.
- Since 2017, over 25 trainings and exercises have occurred.
- Super Users are embedded at the local level and support both training and activations.

Policy & Protocol Development
- Since 2017, over 35 policies and procedures have been established.
- Using a continuous process improvement methodology policies and procedures are implemented during trainings and exercises and team member feedback is then incorporated to strengthen these documents and enhance staff and patient safety.

IMPLICATIONS FOR NURSING PRACTICE

- The lessons learned in the creation, ongoing training, and sustainment of this team can be extrapolated for use in other patient care situations and can serve as a model for similar teams in other facilities.
- Impact of Biothreats Response Team Creation on COVID-19 Response:
  - Interdepartmental relationships developed through the BRT enhanced the conversion of the Pediatric Intensive Care Unit, to care for critically ill adults with COVID-19
  - BRT members have a high level of knowledge and comfort with personal protective equipment and as such, served as experts in the rapid expansion of training and education across the hospital
- Next steps for the Biothreats Response Team include:
  - Formalizing team onboarding through the implementation of an orientation class
  - Expansion of the subspecialty capabilities of the team
  - Changes in training and education to include online learning activities and expansion of training and education programs to support the Region
  - Team members serving as subject matter experts for other programs in the Region

REFERENCES

IMPROVING CLINICAL RESEARCH FLOWSHEET COMPLETION RATES

Anne Strickland RN-BC, BSN Quality and Safety Resource Coordinator
Casandra McIntyre RN, MTS Nurse Director/NPS of Termeer Center for Targeted Therapies
Erika Rosato DNP, MHA, RN, OCN, NE-BC Director of Ambulatory Oncology Clinical Services
MGH Cancer Center
Massachusetts General Hospital, Boston, MA

INTRODUCTION

Paper flowsheets are used in the Termeer Center for Phase 1 clinical trials as a guide for the Infusion Nurse to follow the complex schedule and time sensitive data collection of the day. The baseline measurement of flowsheet completion per the ALCOA standards was 8%. A higher rate of flowsheet completion would result in fewer deviations, better executed protocols, less downstream work for members of the research team, and reflect the high quality research done in Termeer.

AIM

Increase rate of overall completion of flowsheets in Termeer by infusion nurses and CRCs from 8% to 70% by focusing on the attributable, contemporaneous, and original ALCOA categories by February 26, 2020.

INTERVENTION

Collection of diagnostic data and interviewing front line staff before and during implementation guided the interventions for each PDSA cycle.

- **PDSA 1**: Flowsheets are now located on bright yellow clipboards. This allows all staff to easily locate flowsheets for documentation. New “Incomplete” and “Complete” baskets provided giving staff an improved workflow to obtain complete documentation. Example of a “perfect flowsheet” was provided to staff to use as a reference of best practice.

- **PDSA 2**: Leadership provided staff with real time feedback regarding flowsheet documentation.

- **PDSA 3**: Review with staff available collected data. Feedback session with staff to encourage engagement.

- **PDSA 4**: Hand off to staff: Monitor staff self-management.

- **PDSA 5**: Review recent FDA audit of flowsheets with staff which enhanced awareness and understanding of flowsheet importance.

DISCUSSION

The implementation of the colorful clipboards allows all staff to easily locate flowsheets. Prior to this CRC staff members expressed difficulty in locating flowsheets in the unit. Additionally, incomplete flowsheets were being submitted at end of patient appointment as there was no process to obtain missing documentation from other team members. The addition of an “Incomplete” and “Complete” basket provided staff a central location to locate flowsheets when documentation is necessary. As there is some nuance in flowsheet documentation a reference flowsheet was added to clipboards which provides an example of best practice. Additionally, ongoing education continues to be provided for front line staff to further understand the overall importance of this documentation.

CONCLUSIONS

Improved completion rate of flowsheets to 71%, surpassing our aim of 70%. This was made possible due to the dedication of the front line staff.

RESULTS

Rate of flowsheet completion p Chart, three sigma

![Graph showing the results of the PDSA cycles](image)

**CL** 0.0857  
**UCL** 0.4031  
**PDSA 1** 0.926  
**PDSA 2** 0.164  
**PDSA 3** 0.164  
**PDSA 4** 0.716  
**PDSA 5** 1.000

**n = 192**

**Completion Rate (%)**

**Rate of flowsheet completion**

**PDSA 1**

**PDSA 2**

**PDSA 3**

**PDSA 4**

**PDSA 5**

**1.000**

**0.716**

**0.164**

**Completion Rate (%)**

**DISCUSSION**

**RESULTS**

**TEAM**

- **Termeer Infusion**: Kathryn Somers, Margaret Carr
- **Regulatory**: Steven Ripley, Tyler Holley, Miriam McClung
- **Research Nursing**: Barbara Rattner, Aishlinn Lundin, Margaret Joyce

**PROJECT SPONSORS**

- Therese Mulvey MD
- Robert Herman

**NEXT STEPS**

- Staff member will continue to collect and review flowsheets. This will help identify trends and work with ND to analyze data and provide feedback to staff.
- Incorporate flowsheets into education for role groups that are involved in flowsheet.
- Continue to share findings.

This project was undertaken as a Quality Improvement Initiative at Massachusetts General Hospital, and as such was not formally supervised by the Institutional Review Board per their policies.
Telemedicine, through the use of video interaction, allows the cultivation of ongoing relationships between nurses and individuals living with chronic disease. As an alternative to the telephone, this HIPAA secured modality is accessed via a firewall protected Internet connection. Telemedicine has the potential to allow for an enhanced mean of communication between healthcare providers (HCPs) and the individual, family and/or caregivers.

**BACKGROUND**

- Telemedicine, through the use of video interaction, allows the cultivation of ongoing relationships between nurses and individuals living with chronic disease.
- As an alternative to the telephone, this HIPAA secured modality is accessed via a firewall protected Internet connection.
- Telemedicine has the potential to allow for an enhanced mean of communication between healthcare providers (HCPs) and the individual, family and/or caregivers.

**TELEMEDICINE**

“Information, communication, and monitoring technologies which allow healthcare providers to remotely evaluate health status, give educational intervention, or deliver health and social care of patients in their homes.” (Barken, 2018)

**OBJECTIVES**

The aim of this quality improvement initiative was to understand:
1) Nurses’ experience in using telemedicine
2) The areas of focus and time spent for telephone communication with patients/caregivers

**METHODS**

- HCPs were surveyed using an author-developed questionnaire in conjunction with a time survey.
- Findings indicate that 76% of RNs and NPs who currently work with individuals living with chronic diseases had little or no experience with telemedicine.

**TELEMEDICINE QUESTIONNAIRE (N=51)**

1. Are you an RN/NP?
2. How many years have you been practicing?
3. Do you currently work in the outpatient or inpatient setting?
4. What do you know about telemedicine?
5. What experience have you had with managing patients via telemedicine?
6. What do you see as the benefits of implementing telemedicine in your practice?
7. What are the challenges?
8. How would you like to utilize telemedicine? (data collection, clinical assessment, patient education)
9. What would you like to see incorporated in your telemedicine experience as a provider?

- Investigated the amount of time nurses spent on the telephone triaging patient care over the course of a work week.
- Utilized a tally sheet of assigned topics.
- Total hours of documented telephone time: 34.41 hours.

**TIME STUDY RESULTS (N=7)**

<table>
<thead>
<tr>
<th></th>
<th>0 -5 minutes</th>
<th>6 or more minutes</th>
<th>Total number of phone calls</th>
<th>% of phone calls greater than 6 mins.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptom Management</td>
<td>23</td>
<td>45</td>
<td>68</td>
<td>66%</td>
</tr>
<tr>
<td>Health Education</td>
<td>6</td>
<td>10</td>
<td>16</td>
<td>63%</td>
</tr>
<tr>
<td>Family/Caregiver Education</td>
<td>3</td>
<td>7</td>
<td>10</td>
<td>70%</td>
</tr>
<tr>
<td>Medication Questions</td>
<td>53</td>
<td>20</td>
<td>73</td>
<td>27%</td>
</tr>
<tr>
<td>Medication Education</td>
<td>17</td>
<td>8</td>
<td>25</td>
<td>32%</td>
</tr>
<tr>
<td>Medication Reconciliation</td>
<td>7</td>
<td>13</td>
<td>20</td>
<td>32%</td>
</tr>
<tr>
<td>Lab/Imaging Results</td>
<td>19</td>
<td>11</td>
<td>30</td>
<td>37%</td>
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<tr>
<td>Total</td>
<td>128</td>
<td>114</td>
<td>242</td>
<td>47%</td>
</tr>
<tr>
<td>Total number of minutes</td>
<td>640</td>
<td>684 (min. amount of minutes)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DISCUSSION**

- There are important patient/caregiver and family needs that are currently addressed through telephone communication.
- Telemedicine is an evolving means that virtually extends and expands the scope of care to encompass an individual’s primary residence.
- This more interactive modality should be integrated into care settings to enhance communication between HCPs and those served.

**CONCLUSION**

- Nurses are invested in their patient population. When implementing telemedicine it is important to involve nurses in order to have a successful outcome.
- The visual component of telemedicine allows HCPs the ability to assess individuals. This modality also reduces the financial and time burden on the individual.

**FUTURE RESEARCH**

- Researching the role of Nurses as “Telefacilitator Advocates: an Advocate for the individual and caregiver” (Cook, 2018)
- Work is needed to evaluate the feasibility and satisfaction of use of telemedicine as compared to usual telephone communication.
- Focusing on Broadband as a Social Determinants of Health.

“People look up to a Doctor, but they look a Nurse in the eye.” –B. Dolan

This project was undertaken as a Quality Improvement Initiative at Massachusetts General Hospital, and as such was not formally supervised by the Institutional Review Board per their policies.
**BACKGROUND/SIGNIFICANCE**

The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey is administered to patients upon hospital discharge to obtain an understanding of the patient's hospital experience. One question addresses “Quietness at Night.” This score was measured on an inpatient surgical unit at an urban academic medical center and was below the national benchmark at 32.6%. Unit-level surveys indicated that 80% of patients reported a problem with noise: 48% due to staff interruptions to provide care, 22% due to equipment and/or alarms, 19% due to “other” reasons (loud doors, lights, helicopter, etc.), and 11% due to talking at the nurse’s station. A quality-improvement project “Sleep Well Be Well” was implemented to address this problem.

**OBJECTIVES**

- Improve HCAHPS score by 5.5%
- Educate staff on “Sleep Well Be Well”
- Ensure 100% of new admissions receive sleep kits (bag with ear plugs, headphones, eye mask, and lavender wipe)
- Less than 2 red light events per night on Yacker Tracker (a decibel reader; red light events occur when noise is higher than the desired decibel level).

**IMPLEMENTATION**

Staff were educated regarding the importance of minimizing noise and disruption, the use of sleep kits and the purpose of the Yacker Tracker with in-person didactic sessions, informative bulletin boards and educational emails. The utilization of sleep kits and number of “red light” events a night were audited. Staff were re-educated mid-way through the intervention and given incentives including flashlights for ID badges.

**PERFORMANCE IMPROVEMENT/OUTCOME**

Over 6 months, the unit’s Quiet at Night score increased 0.7% to 33.3%, the number of “red light” events reduced steadily and nearly 100% of new admissions received sleep kits. In post-intervention surveys, 72% of patients reported a problem with noise: 44% due to staff interruptions to provide care, 29% due to equipment and/or alarms, 18% due to “other” reasons (loud doors, lights, helicopter, etc.), and 9% due to talking at the nurse’s station.

**POSTCLINICAL DATA**

**POSTCLINICAL PATIENT SURVEY DATA**

**RED LIGHT EVENTS**

**IMPLICATIONS FOR NURSING PRACTICE AND/OR FUTURE RESEARCH**

The Quiet at Night score is affected by many factors and can therefore be difficult to improve upon. Through the current intervention, there was an observed reduction in the number of “red light events” and patient’s perception of talking at the nurse’s station, and an 8% reduction in patients reporting a problem with noise. Nonetheless, the post-intervention surveys indicate that 91% of patients who reported noise was a problem felt it was due to a baseline environmental problem, though there remains an opportunity for future research to continue to improve upon the patient experience.

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