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Implementation of a Nurse Driven Palliative Care Consult: A Quality Improvement Project

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Implementation of a Nurse Driven Palliative Care Consult: A Quality Improvement Project

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A DNP project submitted in partial fulfillment of the requirements for the degree of Doctor of Nursing Practice

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This is to certify that the DNP Project Final Report by

Socnite Sebourne-Francis

has been approved by the DNP Project Team on

April 13th, 2022

for the Doctor of Nursing Practice degree

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Abstract

Background: Palliative care consult (PCC) is an approach that can improve the quality of life and symptom management of patients facing life-threatening illnesses. At a 20-bed medical oncology unit in Connecticut, patients with poor prognosis and worsening symptoms have high re-admission rates within 30 days of post-hospital discharge; yet healthcare providers fail to initiate PCC.

Purpose: This project hypothesizes how implementing a nurse-driven PCC on admission or hospital stays compared to the timing of a physician to a physician PCC improves a plan of care for oncology patients? Will it result in a decrease in 30-day re-admission rates? The goal of this project is relevant to the quadruple aim. Without an improved clinical experience from healthcare providers, the other patient-centric aspects would not be able to reach their optimization over time fully.

Method: The Registered nurse will request and initiate a PCC for patients with a Karnofsky Performance Scale (KPS) score of 50%, rather than usual care, which is to have the physician initiate PCC. A retrospective chart analysis was conducted to identify whether admitted patients had received PCC. A pilot of the KPS was conducted for three months to educate nurses on implementing PCC. The expected outcome was to improve PCC, reduce initiation time, and reduce the re-admission rate. According to specific measures relating to the triple aim, the project goals/-comes evaluated applied to the practice problem.

Results: Data showed that 26 newly diagnosed patients experiencing symptoms were admitted. Among those with a KPS of 50%, a total of 6 patients had received a nurse-driven PCC. During the intervention period, the remaining patients were assessed and found to have a KPS >50%. This suggested that attention to palliation was not needed.

Conclusion: Using KPS to implement a nurse-driven PCC can reduce the re-admission rate and improve PCC and the initiation time. The sustainable plan will not happen overnight; rather, as a continuous change over time that will have a compounding effect on the population under study.

Keywords: Adult oncology patients, palliative care, consult, plan of care, nurse-driven protocol, and re-admission.

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Problem Identification, Development of Clinical Question, and Evidence Review

Background and Significance of Problem

Palliative care consult (PCC) has been proven to have significant benefits for oncology patients, such as improving symptoms, quality of life and reducing nonbeneficial and potentially harmful interventions (Coym et al., 2020; de Meritens et al., 2017). Although access to PCC in the United States has been growing among oncology patients, supporting evidence shows that less than 3.5% of all hospital admissions had received PCC (Avati et al., 2018). This data suggests a greater need to develop a palliative care workforce to implement PCC programs and initiatives. Moreover, a growing body of literature supports the benefits of improving palliative care (PC) among oncology patients (Coym et al., 2020). A randomized controlled trial evidenced that PC can improve the quality of life and survival among small cell lung cancer patients (de Meritens et al., 2017). Despite the great benefits of early implementation of PC, studies show that PCC is underused in the disease process among cancer patients. For instance, based on a recent study among gynecologic oncology patients who met PCC criteria, only 53% received PCC (de Meritens et al., 2017). Likewise, at a comprehensive cancer center, only 45% of patients who died of cancer received PCC (de Meritens et al., 2017). Therefore, it is imperative to implement early PCC (Martz et al., 2020).

PCC initiations have been successful in many settings for patients with chronic debilitating diseases (Rakoski & Volk, 2019). Given the documented underutilization of PCC among oncology patients, a tool such as the Karnofsky Performance Scale (KPS) is already in use at this hospital to determine patients' readiness for chemotherapy. The KPS scale was researched to determine if it could be used for this study to quantify disease burden, and the research sought to explore the early implementation of a PCC (Appendix A). This scale categorizes and measures disease burden to assess the potential for improvement of the quality of life for patients facing life-threatening illnesses during hospitalization admissions (Kiyota et al., 2016). This tool shows that patients with a 50% KPS score may benefit from PCC by improving symptoms management and reducing the 30-day re-admission rate (Barkley et al., 2019). Implementing a nurse-driven approach to PCC will shorten the time necessary to identify patients and provide high-quality care (Martz et al., 2020).

Description of Local Problem

The existing challenges at the 20-bed medical oncology unit at a hospital in Southern Connecticut include the fact that PC plans are often not discussed upon admission or at diagnostic workup. The hospital is covered by hospitalist attendings who utilize a palliative care team through a physician-driven initiation of ordering consults. It has been observed that the oncology patients admitted often have a high disease burden, worsening symptoms, and high re-admission rates within 30 days of post-discharge, resulting in a declining quality of life. A retrospective study shows that early engagement of PCC is associated with a decreased use of chemotherapy and decreased healthcare utilization of services such as emergency visits and hospitalizations (Schlick & Bentrem, 2019). A related study proved that discussing one's prognosis is associated with fewer medical interventions, earlier referral to PCC, and improved quality of life (Schlick & Bentrem, 2019).

Organizational Priority

The implementation strategy necessitates the engagement of an educational group study, revision, and making a change in practice for the patients' quality of care. By upholding this new strategy based on health promotion, a nurse-driven approach will be envisioned early PC as an urgent need. Clinical decision-making will not be delayed.

Just as PC should be integrated early in the disease trajectory, PC training should be integrated early in the professional development of physicians, nurses, and other health care providers (Wiener et al., 2015). Early systematic integration of PC into standard practice constitutes a practical, imperative approach to improving patients' quality of care. This Southern Connecticut hospital and the following personnel support this quality improvement project: Unit Manager; Clinical Nurse Leader, Palliative Care Physician, Palliative Care Advance Nurse Practitioner as practice mentor; and Oncology Advanced Nurse Practitioner as my practice mentor.

Focused Search Question

(P) How does the implementation of nurse-driven palliative care consult for patients scoring ≤50% on the Karnofsky Performance Scale (KPS) on admission or hospital stay (I) compared to usual care (C) improves a plan of care for oncology patients? Will it have the ability to decrease re-admission rates within 30 days or (O) during a three-month timeframe (T)?

Evidence Search

External Evidence. The inquiry looked for the effect of a nurse-driven approach to PCC. A comprehensive search was conducted using electronic databases such as CINAHL Complete, MEDLINE, and Google Scholar for peer-reviewed articles published in English between 2015- and 2021. The following keywords were used in different combinations to search the electronic databases: Adult oncology patients, palliative care, consult, plan of care, nurse-driven protocol, re-admission, anxiety, and symptoms management. The articles were appraised using the Rapid Critical Appraisal (RCA) Tool and the Johns Hopkins Nursing EBP Research Evidence Appraisal

Tool. Studies were considered only if they were the following: peer-reviewed articles, research-based, human subjects, nurse-driven approach with a focus on oncology patients, and written in English. Exclusion criteria in the search were outpatient consults, outpatient palliative care consults, and pediatric PC.

Internal Evidence. Data from the electronic medical records (EMR) was examined to complete a retrospective review of patient records to determine the day of hospital stay that PCC was ordered during the previous 60 days and 30 days (within) and the rate of re-admissions for those patients. Evidence from the EMR revealed that patients were not being assessed for PCC in a timely manner. From December 2020-March 2021, 23 oncology patients were given PCC. Out of 23 patients, two patients experienced one to two days of PC before mortality. There was an average of 13.6 days for PC to mortality for these patients. In other instances, PCC was not initiated among patients to improve symptoms management, even among those facing life-threatening illnesses during hospitalization admissions.

Evidence Appraisal, Summary, and Recommendations

A total of six peer-reviewed articles about palliative care consult (PCC) were appraised. Articles were appraised using the Johns Hopkins Nursing EBP Research Evidence Appraisal Tool and Rapid Critical Appraisal (RCA) tool. All articles included in the synthesis were level 4 and level 5 and were case study cohorts (Appendix B1, B2, and Appendix C).

Considering the evidence, the authors recommend that a nurse-driven palliative care approach can help identify patients who need a Palliative Care Consult (PCC). According to the articles, patients discharged home were less likely to receive a consult than were patients discharged to hospice. It is important to understand the factors providers use to defer palliative care consultation. Further recommendations suggest that using a data-driven approach for PCC would help healthcare providers to identify subgroups of patients who are at high-risk. Supportive evidence has shown that it is essential to encourage PCC for chronically symptomatic patients and not delay referrals. Moreover, level 4 of evidence revealed that palliative care team (PCT) consultation was associated with a favorable quality of dying (QOD) for patients with cancer who died in the hospital. The results suggested that PCT involvement positively affects patients' and relatives' awareness of death and should be recommended (Brinkman et al., 2018). Lastly, a substantial majority of gynecologic perceived palliative care as a useful collaboration that is underused (De Meritens et al., 2017). It is further recommended that the KPS be used as a screening tool to support the needs for PCC as a means of reducing suffering for patients facing life-threatening illnesses. The KPS provides an interpretation of the disease progression based on numerical values and recommends when PCC should be initiated without delay.

Project Plan

Project Goals

1. Analyze collected data comparing nurse-driven PCC vs. standard PCC by March 2022.
2. Upon admission of a patient with an active cancer diagnosis, the KPS tool is to be initiated by the admitting registered nurse (RN).
3. The RN will request a PC consult for each oncology patient with a KPS score of 50%.

Framework

This quality improvement project was guided by the framework of the Iowa Model for Evidence-Based Practice (Buckwalter et al., 2017) (Appendix D). A pilot test was conducted with the admitting RN administering the KPS tool on each new admission for the oncology patient.

Context

Among the existing challenges at the 20-bed medical oncology unit at a hospital in Southern Connecticut is that PC plans are often not discussed upon admission or at the time of diagnostic workup. It has been observed that the oncology patients admitted often have a high disease burden, worsening symptoms, and high re-admission rates within 30 days of post-discharge, resulting in a declining quality of life.

Project Team Members and Roles

A Clinical Nurse Leader at a Southern Connecticut hospital whose primary role in the QI project was to help collect patient data among those patients who needed PCC. A Case Manager who oversaw the referral process of PCC patients in the project. A Senior Director of clinical operations helped maintain a log of patients who had PCC at any point in the previous year until the present. Two practice mentors provided guidance throughout the project. A project faculty advisor who assisted in project assessment, review, and guidance on QI standards kept the project on track. A Nurse Manager who assisted in implementing PCC and served as a change champion of the project.

Key Stakeholders

The key stakeholders of the QI project are as follows: Oncology Unit Manager, Palliative Care Nurse Practitioner, Clinical Nurse Leader, Senior Director of Clinical Operations, Palliative Care Physician, and nursing staff who served as team members. The goal of the project was communicated to every member of the team.

The stakeholders learned how to address and strategically teach early PC concepts that would promote a change in practice. Clinicians and other healthcare providers were required to adopt and implement the change based on evidence-based practice (EBP).

Barriers and Facilitators

The barriers to implementation that I have encountered had to do with the lack of time to conduct the assessment and the lack of participation from patients, nurses, and doctors. When it came to enrolling patients in the project, I was not able to enlist the maximum number of subjects. Some of the potential patients either had been discharged to hospice or had been discharged two days after being admitted. Moreover, as the primary private investigator, I was ill with COVID-19, as were some of the other staff involved in the project. As a result, I was not able to implement the project as planned.

Furthermore, there has been some resistance to practice changes relating to PCC about physician buy-in. Attending physicians consider discussing PCC only if the patient is imminently dying. The project facilitators are as follows: myself as the Principle Investigator, the Clinical Nurse Leader, and staff nurses. We utilized google forms for data collection, a QR code to access the form via cell phone, and acquired education on the KPS Scale.

Estimated Timeline

Regarding the planning phase of the development of this project, the estimated time duration for the implementation phase is highlighted in Appendix E.

Resources

The major criterion for the completion of any project, no matter the size and complexity of the project, depends on the anticipated budgeted cost. The integration of this proposed process would be cost-neutral, as it would occur during regular working hours during the admission process of qualifying individuals. Buy-in for physicians and other health care providers would be enlisted in the process of noting the KPS scale results and PCC. This procedure would decrease the cost of re-admissions (including Medicare penalty) and potentially cost-preventable ER use. PCC is a billable service, so that it would increase billable items. Therefore, the scale will be integrated within the admission template within EMR. The anticipated cost for the QI project is highlighted in table 1 and table 2 (Appendix F).

Ethical Approval

This project was approved by the Institutional Review Board (IRB). It was determined that the project did not require further review or oversight by the Institutional Review Board (Appendix G). Furthermore, complete confidentially, and anonymity to shield the identity of the participants were assured by numerically coding the data collected. Moreover, the data collected regarding the participants in the study was locked in a file cabinet where access was limited to myself and my mentor. Lastly, the unit manager approved the implementation of the project.

Data Collection Plan and Analysis

The following data was collected and recorded on Excel Spreadsheets: Admitting diagnosis, demographics, symptoms, past medical history, goals of care, code status, advanced directives, and the KPS score. For the data analysis, bar graphs and pie charts were used to determine the outcomes, trends, time of referrals, presenting symptoms, admitting diagnosis, the average time to PCC, type of cancers, KPS score, patient race and ethnicity, hospital-wide PCC, 30-day re-admission types, patient outcome and outcome of discharge.

Project Implementation

All patients with a KPS of ≤50% were eligible to receive a nurse-driven PC consult approach in lieu of the 'usual care referral' for oncology patients who score >50% on the KPS. The first 20 patients identified were to participate in this referral, and the 2nd 20 patients were to be followed for the date of referral**.** The re-admission rates were measured within 30 days of the patients I selected vs. a random 20 patients who did not get PCC. No patient was denied a PCC referral. Alternatively, a comparison analysis was done comparing the average time to referral (including no referral) for all cancer-admitted patients.

There were deviations from the project plan. Barriers encountered during the implementation phase forced me to reconsider, examine, and continuously re-evaluate data in connection with my hypothesis. Due to the increase in hospital COVID-19 cases, interactions with oncology patients were limited. There were shortages of nursing staff, and a low census of patients was registered. Moreover, attending physicians still believed that PCC should only be administered to dying patients, and they, therefore, rejected the implementation of PCC. To overcome this resistance, I had to explain to those physicians that the importance of implementing PCC should be for patients who are dying and include those who are experiencing post-operative pain. PCC introduces a method to improve quality of life. These obstacles necessitated a change in the project protocol. The total number of patients I recruited for the study was N=25. Moreover, the measuring process required the task of educating the nursing staff and the rest of my team. The data collection went well based on the new approach.

Evaluation

Process Measures. The measuring process consists of a finite sample of 40 Oncology patients enrolled in the study. All participants were recruited from the oncology unit. The inclusion criteria for the study were as follows: any gender, any race/ethnicity, age 18 years to 95 years old, newly diagnosed oncology patient who was experiencing symptoms, and KPS ≤50%. The exclusion criteria were as follows: < 18 years old and >95 years old, patient expected survival <10 days, KPS >50%, and patients on outpatient therapy

Patient race and ethnicity were 64% Caucasian, 24% Hispanic, 8% African American and 4% Brazilian (Appendix H). The patients' genders were 12 males and 13 females (Appendix I). Admitted diagnoses were five patients who experienced pain symptoms, five respiratory symptoms, two electrolyte imbalance symptoms, two neurological symptoms, two elective admission, four gastrointestinal symptoms, and four hematological symptoms (Appendix J). Moreover, the presenting symptoms were gastrointestinal symptoms such as diarrhea, small bowel obstruction, intractable vomiting; elective admission included chemotherapy pain symptoms such as vaginal bleeding, back pain, abdominal pain, bone metastasis; neurological symptoms included encephalopathy; electrolyte imbalance symptoms were hyperkalemia, hyponatremia, and failure to thrive (Appendix K).

Data established that having a defined code status is important. However, it was not the main reason to have a palliative care consult. It was found that 16 patients were Full Code, three patients were considered as Do Not Resuscitate (DNR), and six patients were Full Code status but transitioned to DNR during their admission stay (Appendix L).

Outcome Measures. In a comparison of patient outcomes, it was found that out of the total of admissions, six patients had received a nurse-driven PCC, while 19 patients received standard care. Supporting data showed that out of the six patients who received a nurse-driven PCC, a total of 2 patients were discharged to home with nursing services, three patients were discharged to a skilled nursing facility, and one patient was discharged to a rehabilitation center (Appendix M).

Furthermore, out of the total number of patients (N=25), it was found that only 32% of the patients had their goals of care discussed, whereas 68% of patients did not. This irrefutable data evidence that goals of care were not established for more than half of the patients who were supposed to have received PCC (Appendix N).

Moreover, in examining data for re-admissions within 30 days, it was found that 12 patients were readmitted while 13 patients were not. Patients were readmitted for different reasons. One patient with direct admission to ICU for sepsis had more than one admission. One patient had an ED visit only and additional surgery; eight patients had one full admission for more than one day (Appendix O).

Additional data on patients who were admitted presenting a cancer diagnosis who did not receive a PCC revealed that 30% of the patients had Leukemia, 20% had Lymphoma, and 25% had Myelodysplastic Syndrome (Appendix P). Data showed that 71% received standard care such as chemotherapy, radiation, and surgery among patients in active treatment, whereas 21% of patients did not (Appendix Q). Additionally, 17 patients had advanced directives compared to 8 patients who were not (Appendix R). These numbers showed that the implementation of a nurse-driven PCC reduced the re-admission rate better than the standard care practice.

In the hospitalization setting plus utilization of another performance scale such as the Eastern Cooperative Oncology Group (ECOG), some patients were put into two categories of KPS. It would have been preferable, for research purposes, to delineate the distinctions underlying the selection process for the two categories. However, the short time frame of this study made such information difficult to access because doctors use a different performance scale, and patients were not in their normal settings. I was precluded from further evaluation of their performance. Based on the KPS score, a person with 60% is a bit more independent. A person with 40% and lower was at a point when they could not care for themselves, as the disease progression was rapid (Appendix S).

Supportive evidence showed that the average time to a palliative care consult was 6.07143 days. This does not include patients who had no consult ordered (Appendix T). This average time to receive a PCC is too long for patients to wait on healthcare providers to establish goals of care.

Lastly, during the time of my ongoing project, there was an increase in PPC made to the service of patients throughout the hospital. Data showed that from November 21st to March 22nd, 2022, there was a spike in the total PCC to oncology PCC (Appendix U). One reason for the increase in PCC could have been attributed to the awareness of my project. It was found that there were cancer patients admitted to other units in the hospital.

Return on Investment. Nursing staff were educated in the implementation of palliative care consults. They were taught how to utilize the KPS score to quantify disease burden to implement a nurse-driven approach to PCC and thereby shorten the referral time. By utilizing a satisfaction survey, patients' quality of life was improved as data also suggested a greater need for a palliative care workforce. Moreover, integrating the scale within EMR would decrease re-admission costs and potentially cost preventable ER use.

Dissemination

The dissemination includes creating a poster presentation at Dr. Susan L. Davis, RN., & Richard J. Henley College of Nursing on April 22, 2022, the purpose of which was to provide awareness about the change in practice regarding PCC (Appendix V); an abstract to be submitted at the Annual Connecticut Nursing Alliance Conference held by XXXXXXX; submission of abstract to hospital-wide newsletter and intranet; presentation of findings to the University DNP committee; and presentation of findings to the stakeholders. Lastly, the manuscript of my project will be submitted to the Oncology Nursing Society (ONS) and the International Journal of Palliative Nursing.

Key Lessons Learned. A nurse-driven approach for PCC would assist healthcare providers in identifying subgroups of patients who are at risk for re-admission. Physicians and patients are not ready to implement this change in practice because of misconceptions about PC. Physicians should not delay the request for a consult. Lastly, one must anticipate the variable nature of a QI project by remaining flexible and continuously re-evaluating data, preparing to change directions, never becoming complacent, and taking nothing for granted when dealing with patients and other healthcare providers.

Sustainability Plan. Audit and feedback are a process underlying clinical performance, which may include recommendations for action to increase group awareness of a specific innovative practice. It plays an important role in promoting patient safety and adherence to evidence-based guidelines (Christina, Baldwin, Biron, Emed, & Lepage, 2016). By receiving feedback early in the implementation process, one will improve practice (Cullen et al., 2017). The change champion will provide feedback on how many physicians and other healthcare providers are implementing the change in practice, the evidence of success, and suggest areas that need improvement in quality of care. Another approach to sustain a plan to implement PCC is to encourage staff education programs on a bi-annual basis, incorporating a hard stop in the EMR to flag patients who need PCC, and incorporating a nurse navigator to discuss PC with patients and physicians. The change, based on evidence-based practice, will be sustained to implement a nurse-driven PCC.

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Appendix A. Karnofsky Performance Scale

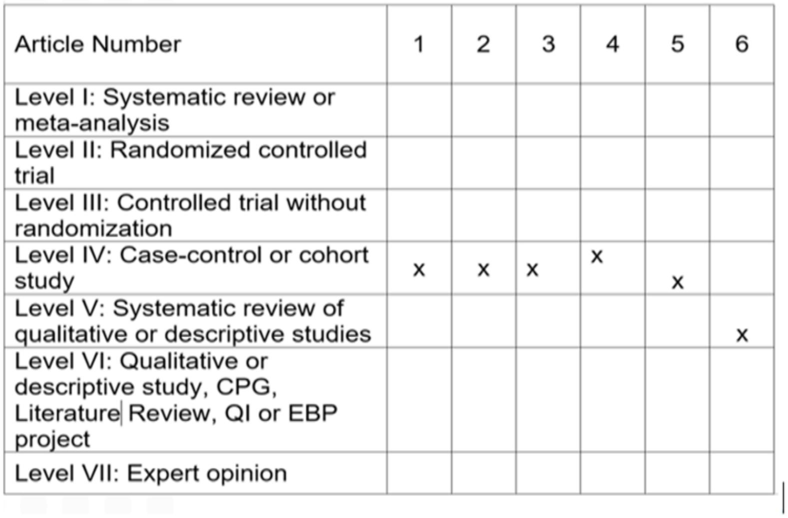
Able to carry on normal activity and to work; no special care needed.	100	Normal no complaints; no evidence of disease.
	90	Able to carry on normal activity; minor signs or symptoms of disease.
	80	Normal activity with effort; some signs or symptoms of disease.
Unable to work; able to live at home and care for most personal needs; varying amount of assistance needed.	70	Cares for self; unable to carry on normal activity or to do active work.
	60	Requires occasional assistance, but is able to care for most of his personal needs.
	50	Requires considerable assistance and frequent medical care.
Unable to care for self; requires equivalent of institutional or hospital care; disease may be progressing rapidly.	40	Disabled; requires special care and assistance.
	30	Severely disabled; hospital admission is indicated although death not imminent.
	20	Very sick; hospital admission necessary; active supportive treatment necessary.
	10	Moribund; fatal processes progressing rapidly.
	0	Dead

Karnofsky DA, Abelmann WH, Craver LF, Burchenal JH. The Use of the Nitrogen Mustards in the Palliative Treatment of Carcinoma – with Particular Reference to Bronchogenic Carcinoma. Cancer. 1948; 1(4):634-56.

Note. Karnofsky Performance Scale (KPS) quantifies a patient's functional abilities and the impact of treatments like chemotherapy on their basic functional capacities. It is sometimes also used to determine patients' prognosis and treatment.

Appendix B1. Evidence Synthesis

Table1. *Evidence Synthesis*



Article Number	1	2	3	4	5	6
Level I: Systematic review or meta-analysis						
Level II: Randomized controlled trial						
Level III: Controlled trial without randomization						
Level IV: Case-control or cohort study	x	x	x	x	x	
Level V: Systematic review of qualitative or descriptive studies						x
Level VI: Qualitative or descriptive study, CPG, Literature Review, QI or EBP project						
Level VII: Expert opinion						

Legend:
1-Brinkman-Stoppelenburg, et al., 2018
2- De Meritens, et al., 2017
3- Martz, et al., 2020
4- Hua, et al., 2018
5- Liu, et al., 2017
6- Hickman, et al., 2020

Appendix B2. Evidence Table

Search Question in PICO format: The clinical question to drive evidence search for this project; with oncology nurses (P), how does implementation action of palliative care consult on admission or hospital stay (I) compared to a standard palliative care consult (C) Improve a plan of care for oncology patients (O)?

Article number	First author year	Purpose	Evidence type, level of evidence	Sample, setting	Major Variables Study and their Definitions	How major variables were measured	Findings that help answer question	Worth to practice/project, quality of evidence
1	(Brinkman-Stoppelenburg, Witkamp, van Zuylen, van der Rijt, & van der Heide, 2018)	Studied the association between palliative care team (PCT) consultation and QOD in the hospital as experienced by relatives	Cohort study, IV	Relatives of patients who died from cancer, university hospital, 1300 bed	Quality of dying (QOD) as perceived by relatives	93-item questionnaire QOD as perceived by relatives. The questionnaire included relevant items from validated questionnaires, including the VOICES (Views of Informal Caregivers Evaluation of Services Scale) and the QODD (Quality of Death and Dying scale).	175 out of 343 (51%) relatives responded to the questionnaire. In multivariable linear regression, PCT was associated with a 1.0-point better QOD (95% CI 0.07–1.96). In most of the subdomains of QOD, we found a non-significant trend towards a more favorable outcome for patients for whom the PCT was consulted	LOE IV, strong. PCT consultation was associated with a favorable QOD for patients with cancer who died in the hospital. Results suggest that PCT involvement positively affects patients' and relatives' awareness of death.
2	(De Meritens et al., 2017)	Describe practice patterns, attitudes, and barriers to the integration of	Cohort study, IV	Members of the Society of Gynecologic Oncology, 145 respondents, 71% were	Inpatient palliative care services and barriers to consultation	Descriptive statistics were used, and two-sample z-tests of proportions were performed	The vast majority (92%) had palliative care services available for	LOE IV, strong. majority of gynecologic oncologists perceived

Article number	First author year	Purpose	Evidence type, level of evidence	Sample, setting	Major Variables Study and their Definitions	How major variables were measured	Findings that help answer question	Worth to practice/project, quality of evidence
		palliative care services by gynecologic oncologists		attending physicians, and 58% worked at an academic medical center		to compare responses to a related question. STATA version 14.2 (StataCorp, College Station, TX) for our calculations.	consultation at their hospital; 48% thought palliative care services were appropriately used, 51% thought they were underused, and 1% thought they were overused. Thirty percent of respondents felt that palliative care services should be incorporated at first recurrence, whereas 42% thought palliative care should be incorporated when the prognosis for life expectancy is # 6 months. Most participants (75%) responded that palliative care consultation is reasonable for symptom control at any stage of the disease. Respondents were most likely to consult palliative care services for	palliative care as a useful collaboration that is underused. Fear of perceived abandonment by the patient and family members was identified as a significant barrier to palliative care consult

Article number	First author year	Purpose	Evidence type, level of evidence	Sample, setting	Major Variables Study and their Definitions	How major variables were measured	Findings that help answer question	Worth to practice/project, quality of evidence
							pain control (53%) and other symptoms (63%). Eighty-three percent of respondents thought communicating prognosis was the primary team's responsibility. In contrast, the responsibilities for pain and symptom control, resuscitation status, and goals of care discussions were split between the primary team only and both teams. The main barrier to consulting palliative care services was the concern that patients and families would feel abandoned by the primary oncologist (73%). Ninety-seven percent of respondents answered that palliative care services are useful to	

Article number	First author year	Purpose	Evidence type, level of evidence	Sample, setting	Major Variables Study and their Definitions	How major variables were measured	Findings that help answer question	Worth to practice/project, quality of evidence
							improving patient care.	
3	(Martz, Alderden, Bassett, & Swick, 2020)	The purpose of this study was to compare the outcomes of patients with positive results on the nurse-driven palliative care screening tool who received or did not receive a palliative care consult.	Cohort study, IV	Eligible patients were adults admitted to the 14-bed medical-surgical ICU of a community health system in Idaho between September 2017 and March 2018. Sample size: Records of 112 patients with positive results on palliative care screening	Nurse-Driven palliative care consult Definitions not included in the guideline	compared outcomes of patients with positive screening results who received a specialty palliative care consult with outcomes of patients with positive screening results who did not receive a referral for a palliative care consult. The primary outcome measures were the length of ICU stay, length of hospital stay, and discharge disposition	Sixty-five patients (58%) did not receive a palliative care consult. No significant differences were found in a hospital, or intensive care unit stay length. Most patients who experienced mechanical ventilation did not receive a palliative care consultation ($r2 = 5.14$, $P = .02$). Patients who were discharged to home were also less likely to receive a consult ($r2 = 4.1$, $P = .04$), whereas patients who were discharged to hospice were more likely to receive a consult ($r2 = 19.39$, $P < .001$)	unmet needs exist for specialty palliative care. Understanding the methods of identifying patients and providing them with high-quality conversations about palliative care is critically important. It is supported by strong evidence from many other studies. No recommendation was made. The quality of evidence is moderate due to limitations in the study.

Article number	First author year	Purpose	Evidence type, level of evidence	Sample, setting	Major Variables Study and their Definitions	How major variables were measured	Findings that help answer question	Worth to practice/project, quality of evidence
4	(Hua, Ma, Li, & Wunsch, 2018)	To examine the ability of existing triggers for intensive care unit (ICU) palliative care consultation to predict 6-month mortality and derive new triggers for consultation based on risk factors for 6-month mortality	Cohort study, IV	The cohort consisted of 1,019,849 critically ill patients in NY State from 2008–to 2013; 195,847 (19.2%) died within six months of their admission, including receiving care in an ICU.	Palliative care consultation	We examined the sensitivity and specificity of existing triggers for predicting 6-month mortality and used logistic regression to generate patient subgroups at high risk for 6-month mortality as potential novel triggers for ICU palliative care consultation.	Of 1,019,849 patients, 195,847 (19.2%) died within 6 months of admission. Existing triggers were specific but not sensitive for predicting 6-month mortality, (sensitivity 0.3%–11.1%, specificity 96.5–99.9% for individual triggers). Using logistic regression, patient subgroups with the highest predicted probability of 6-month mortality were older patients admitted with sepsis (age 70–79 probability 49.7%, [49.5–50.0]) or cancer (non-metastatic cancer, age 70–79 probability 51.5%, [51.1–51.9]; metastatic cancer, age 70–79 probability 60.3%, [59.9–60.6]). Sensitivity and specificity of novel	The quality of evidence was good, and LOE= IV, strong Existing triggers for palliative care consultation are specific but insensitive for 6-month mortality. Using a data-driven approach to derive novel triggers may identify subgroups of patients at high risk of 6-month mortality.

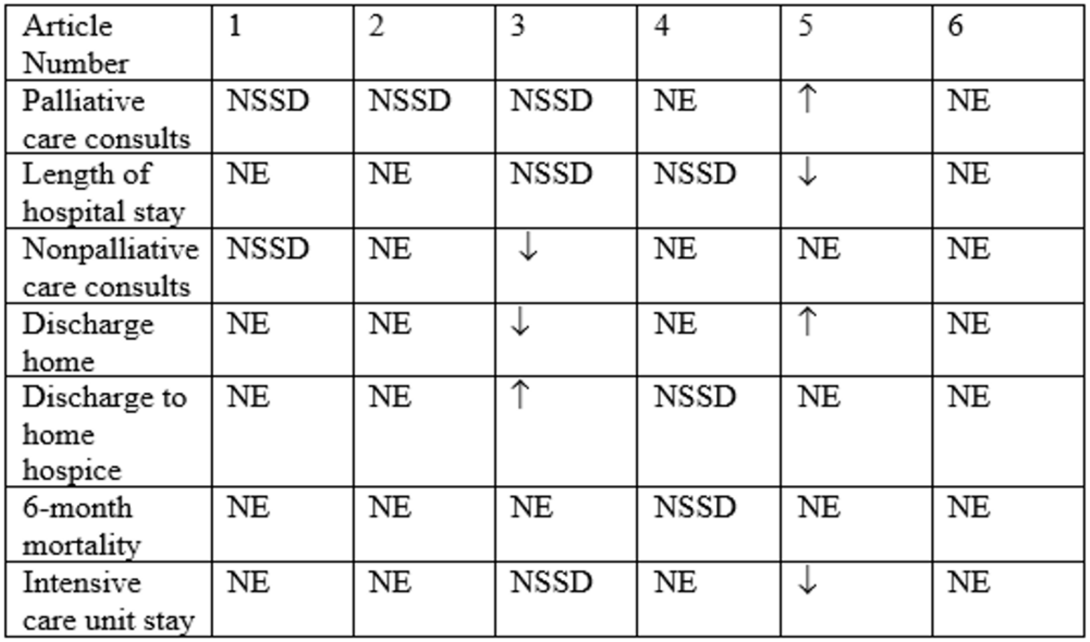
Article number	First author year	Purpose	Evidence type, level of evidence	Sample, setting	Major Variables Study and their Definitions	How major variables were measured	Findings that help answer question	Worth to practice/project, quality of evidence
							triggers ranged from 0.05% to 9.2% and 98.6% to 99.9%, respectively	
5	(Liu, Malmstrom, Burhanna, & Rodin, 2017)	This case study reports the evolution of an inpatient palliative consultation (IPC) team to show how IPC induces culture change in a hospital that previously had no palliative care.	Case study, IV	A total of 1700 consecutive adult inpatients from May 2009 to October 2013. A Catholic university-affiliated, inner-city hospital	Consultation records enumerated demographics, code status, powers of attorney, referring physician, the reason for consultation, and discharge destination	Simple descriptive statistics	internal medicine (24%), geriatrics (21%), neurology (including stroke and neurosurgery, 14.3%), medical intensive care unit (MICU, 12.2%), and hematology-oncology (10.3%). The MICU consults increased 17.6% over time. The number of consults nearly doubled after trainees began rounding with the service. Hospice discharges increased by 9.2%. Palliative management of in-hospital expirations increased 2- to 3-fold. The most common consultation requests were for pain and non-pain symptoms, establishing goals	LOE IV, moderate. consistent with the experience of other hospitals that have invested in palliative care and may be instructive to those who intend to launch a program.

Article number	First author year	Purpose	Evidence type, level of evidence	Sample, setting	Major Variables Study and their Definitions	How major variables were measured	Findings that help answer question	Worth to practice/project, quality of evidence
							of care for patients experiencing clinical decline, and convening family meetings in cases of divided judgment.	
6	(Hickman, Parks, Unroe, Ott, & Ersek, 2020)	This article aims to provide an overview of the palliative care registered nurse role and its implementation in nursing facilities and describe core functions that are transferrable to other contexts.	Expert opinion, level V		The role of palliative care registered nurse	The Palliative care registered nurse (PCRN) evaluates whether there were communication issues, such as whether the provider was aware of a documented preference for comfort care and what role the family had in the decision to transfer the resident. The PCRN then uses this information to ensure that changes are made to the care plan to reduce the likelihood that the resident	some of how this role was operationalized are context-dependent; all the interventions described have the potential to be adapted and implemented in other settings where care is provided to seriously ill patients	Working in collaboration with existing clinical staff and medical providers, the PCRN focuses on managing symptoms, advance care planning, achieving concordant goal care, and promoting quality of life. The PCRN serves as a resource for families through education and support Recommendation that a job description for the role includes (1) at least five

Article number	First author year	Purpose	Evidence type, level of evidence	Sample, setting	Major Variables Study and their Definitions	How major variables were measured	Findings that help answer question	Worth to practice/project, quality of evidence
						will be hospitalized.		years of clinical experience in a nursing facility setting, (2) training in hospice/palliative care; (3) certification in a standardized approach to ACP such as Respecting Choices,20 Serious Illness Conversation Guide,31,32 and Veterans' Health Administration Goals of Care Communication Training33; (4) demonstrated teaching and mentoring skills23,26; and (5) strong communication skills to navigate complex interpersonal dynamics.

Appendix C. Outcome Synthesis

Table 2. *Outcome Synthesis*

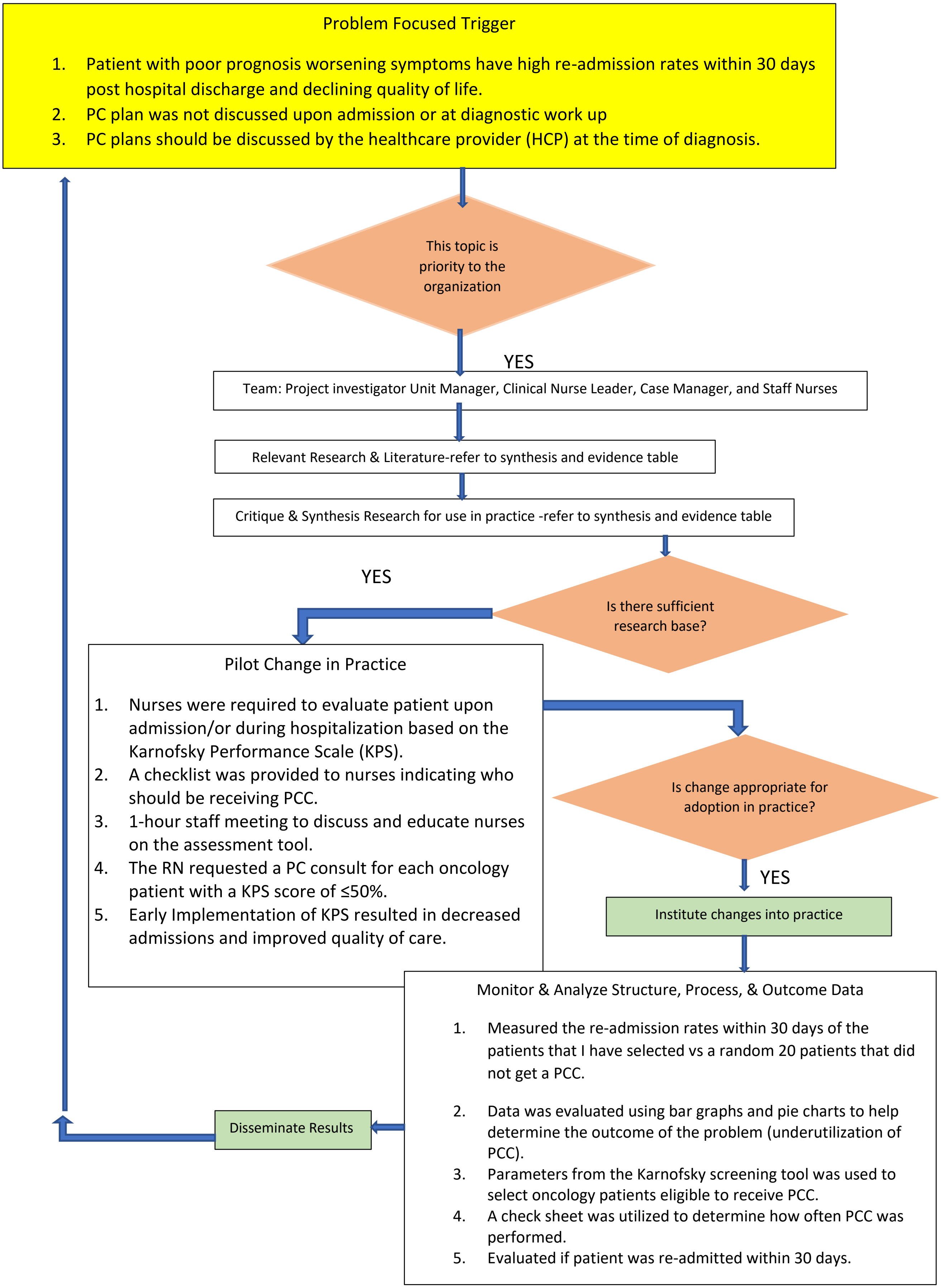


Article Number	1	2	3	4	5	6
Palliative care consults	NSSD	NSSD	NSSD	NE	↑	NE
Length of hospital stay	NE	NE	NSSD	NSSD	↓	NE
Nonpalliative care consults	NSSD	NE	↓	NE	NE	NE
Discharge home	NE	NE	↓	NE	↑	NE
Discharge to home hospice	NE	NE	↑	NSSD	NE	NE
6-month mortality	NE	NE	NE	NSSD	NE	NE
Intensive care unit stay	NE	NE	NSSD	NE	↓	NE

Legend:
1-Brinkman-Stoppelenburg, et al., 2018
2- De Meritens, et al., 2017
3- Martz, et al., 2020
4- Hua, et al., 2018
5- Liu, et al., 2017
6- Hickman, et al., 2020

Legend:
↑ -Increase
↓-Decrease
NE- not evaluated
NSSD-no statistically significant difference

Appendix D. Iowa Model



Problem Focused Trigger

1. Patient with poor prognosis worsening symptoms have high re-admission rates within 30 days post hospital discharge and declining quality of life.
2. PC plan was not discussed upon admission or at diagnostic work up
3. PC plans should be discussed by the healthcare provider (HCP) at the time of diagnosis.

This topic is priority to the organization

Team: Project investigator Unit Manager, Clinical Nurse Leader, Case Manager, and Staff Nurses

Relevant Research & Literature-refer to synthesis and evidence table

Critique & Synthesis Research for use in practice -refer to synthesis and evidence table

Is there sufficient research base?

Pilot Change in Practice

1. Nurses were required to evaluate patient upon admission/or during hospitalization based on the Karnofsky Performance Scale (KPS).
2. A checklist was provided to nurses indicating who should be receiving PCC.
3. 1-hour staff meeting to discuss and educate nurses on the assessment tool.
4. The RN requested a PC consult for each oncology patient with a KPS score of ≤50%.
5. Early Implementation of KPS resulted in decreased admissions and improved quality of care.

Is change appropriate for adoption in practice?

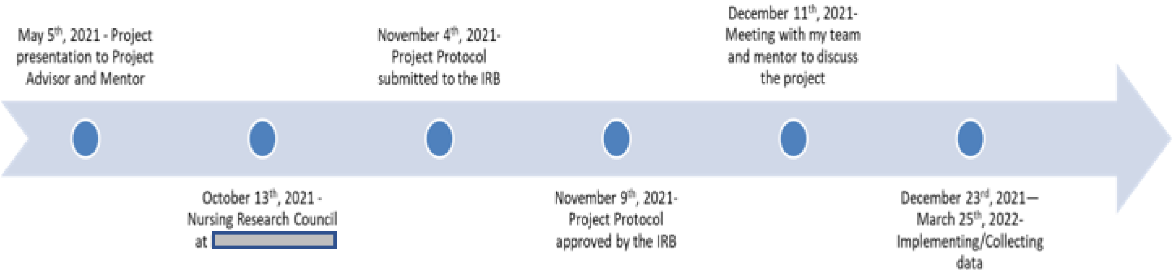
Institute changes into practice

Monitor & Analyze Structure, Process, & Outcome Data

1. Measured the re-admission rates within 30 days of the patients that I have selected vs a random 20 patients that did not get a PCC.
2. Data was evaluated using bar graphs and pie charts to help determine the outcome of the problem (underutilization of PCC).
3. Parameters from the Karnofsky screening tool was used to select oncology patients eligible to receive PCC.
4. A check sheet was utilized to determine how often PCC was performed.
5. Evaluated if patient was re-admitted within 30 days.

Disseminate Results

Appendix E. **Implementation Timeline & Activities**



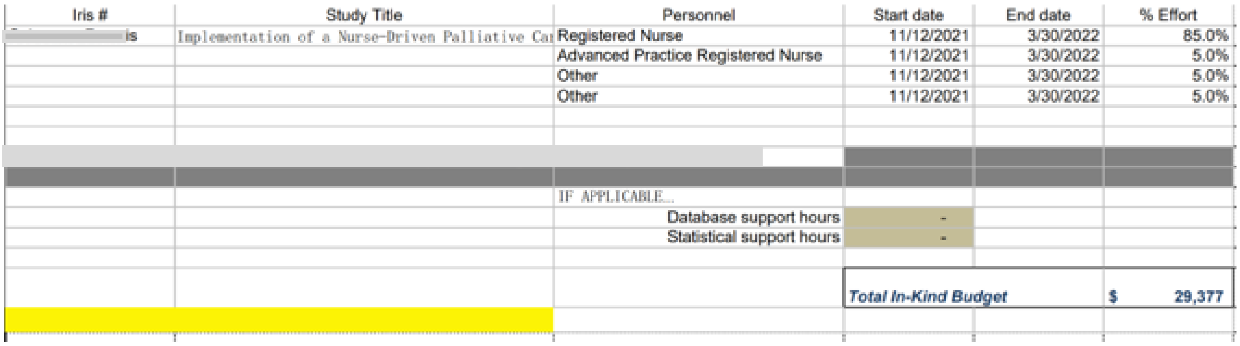
S

Appendix F. Project Cost & In-Kind Budget

Table 3. *Project Costs*

Expenses	
SUPPLIES FROM STAPLES	
4 Accordion Folders	$51.96
Laminating Sheets	$5.50
Printing Paper, 8.5" x 11"	$10.60
Poster board	$20.99
Total Estimated Cost	$89.05

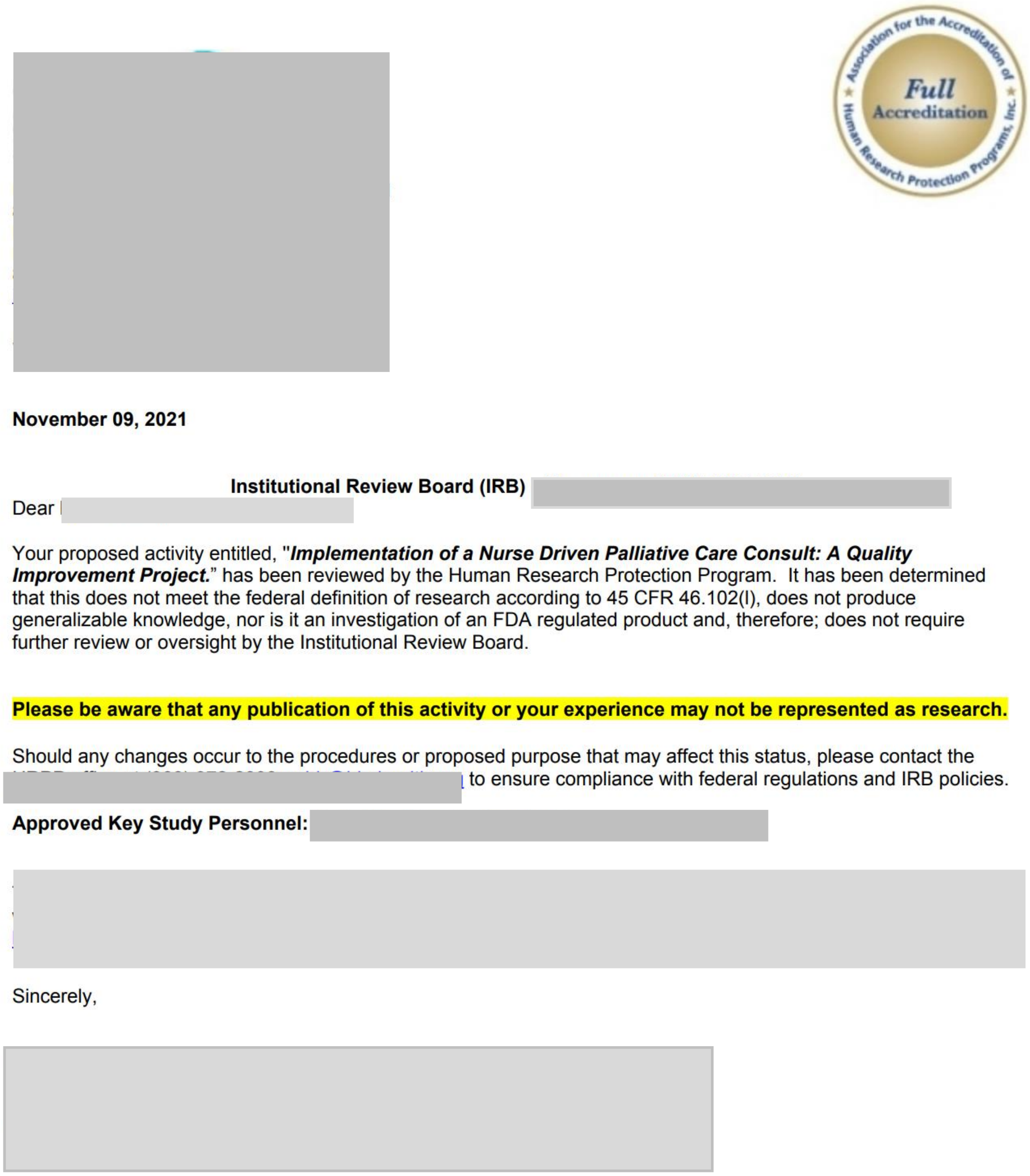
Table 4. *Resources/Budget*



Iris #	Study Title	Personnel	Start date	End date	% Effort
[redacted]is	Implementation of a Nurse-Driven Palliative Ca	Registered Nurse	11/12/2021	3/30/2022	85.0%
		Advanced Practice Registered Nurse	11/12/2021	3/30/2022	5.0%
		Other	11/12/2021	3/30/2022	5.0%
		Other	11/12/2021	3/30/2022	5.0%
		IF APPLICABLE...			
		Database support hours	-		
		Statistical support hours	-		
			Total In-Kind Budget		$ 29,377

Note. An estimation of the cost to fund the project.

Appendix G. Institutional Review Board Letter



[redacted]

Association for the Accreditation of Human Research Protection Programs, Inc.
Full Accreditation

November 09, 2021

Institutional Review Board (IRB) [redacted]

Dear [redacted]

Your proposed activity entitled, "***Implementation of a Nurse Driven Palliative Care Consult: A Quality Improvement Project.***" has been reviewed by the Human Research Protection Program. It has been determined that this does not meet the federal definition of research according to 45 CFR 46.102(l), does not produce generalizable knowledge, nor is it an investigation of an FDA regulated product and, therefore; does not require further review or oversight by the Institutional Review Board.

Please be aware that any publication of this activity or your experience may not be represented as research.

Should any changes occur to the procedures or proposed purpose that may affect this status, please contact the [redacted] to ensure compliance with federal regulations and IRB policies.

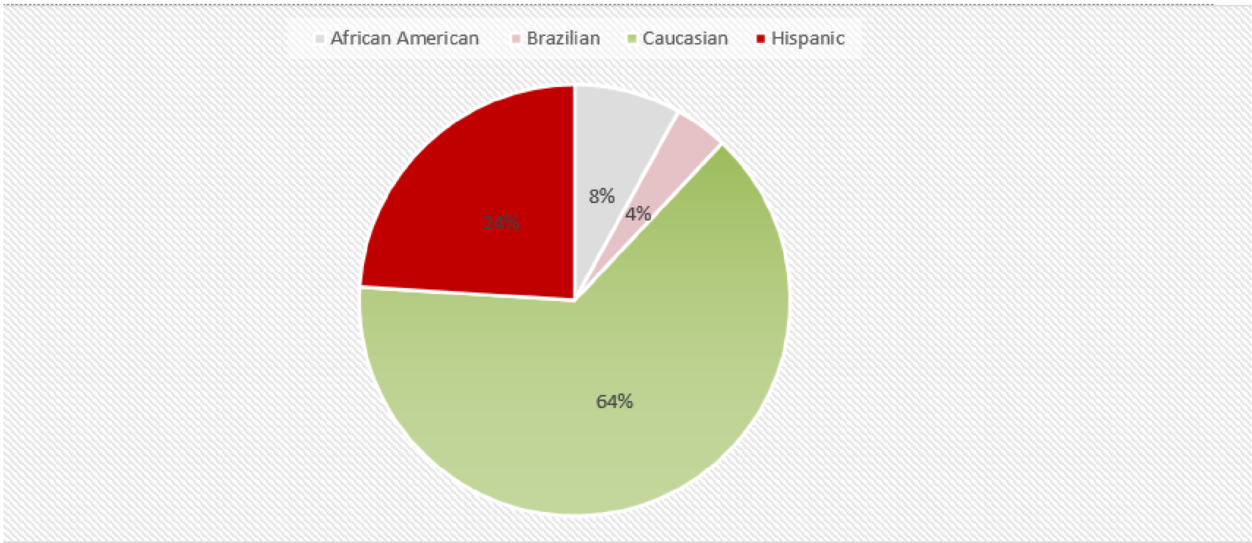
Approved Key Study Personnel: [redacted]

[redacted]

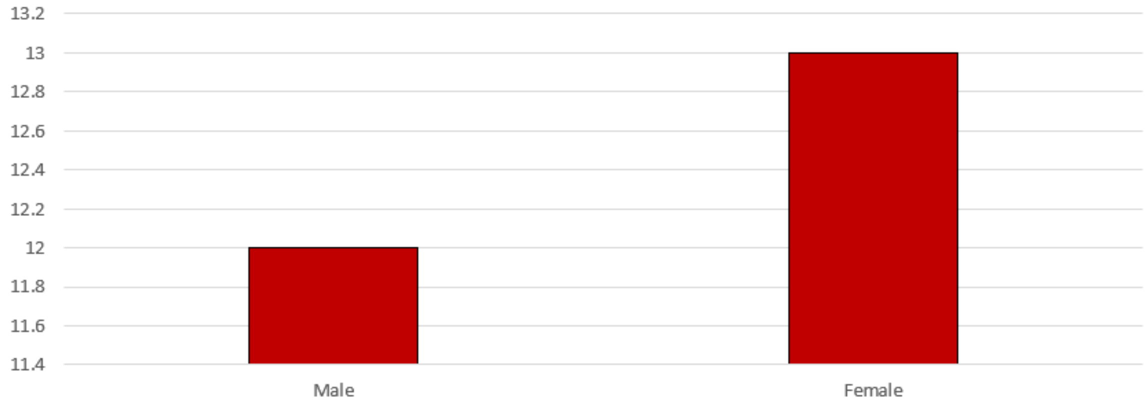
Sincerely,

[redacted]

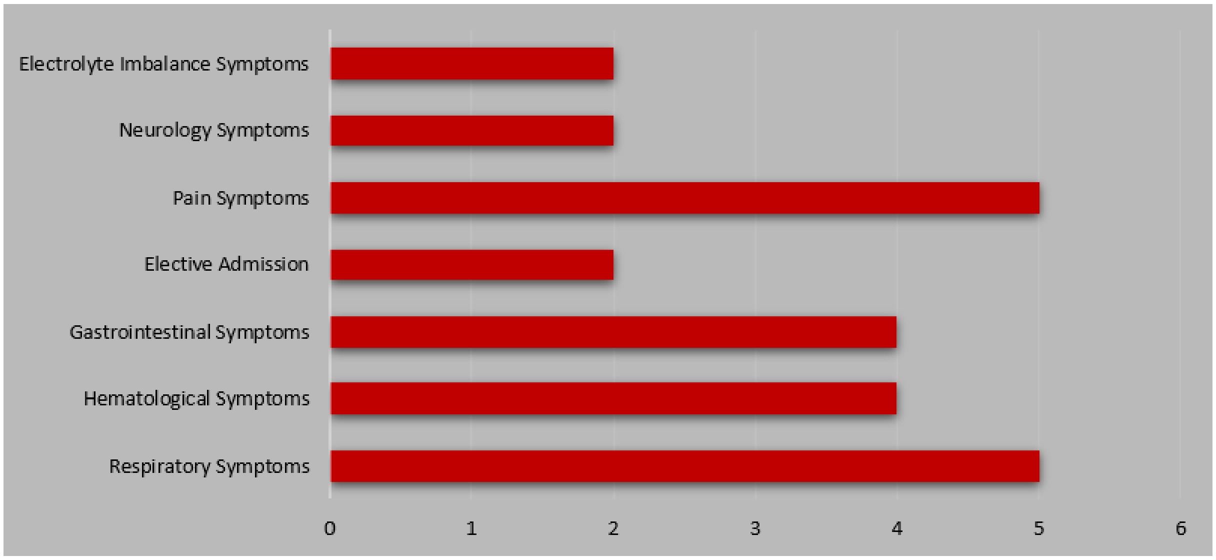
Appendix H. Patient Race and Ethnicity



Appendix I. Patient Sex



Appendix J. Admitting Diagnosis



Appendix K. Presenting Symptoms

Gastrointestinal Symptoms

- Diarrhea
- Small bowel obstruction
- Intractable vomiting

Elective Admission

- Chemotherapy

Pain Symptoms

- Vaginal bleeding
- Back pain
- Abdominal pain
- Pain (General)
- Bone metastasis

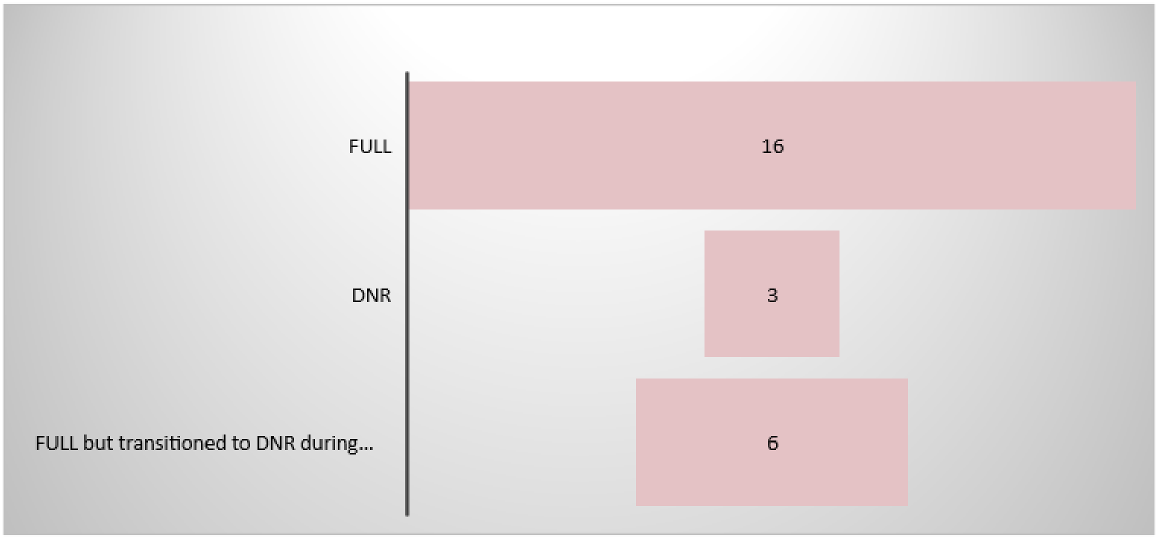
Neurology Symptoms

- Encephalopathy

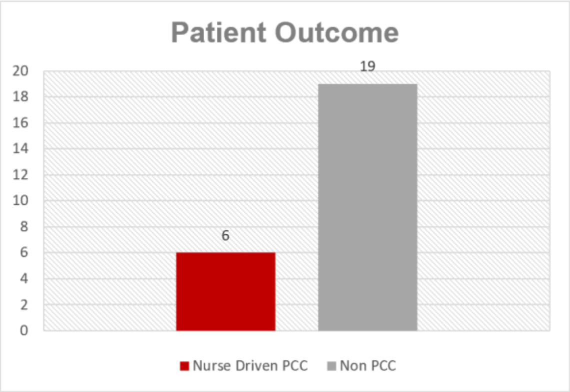
Electrolyte Imbalance Symptoms

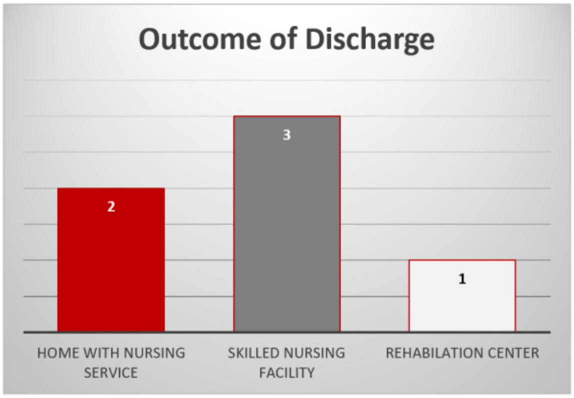
- Hyperkalemia
- Hyponatremia
- Failure to thrive

Appendix L. Code Status

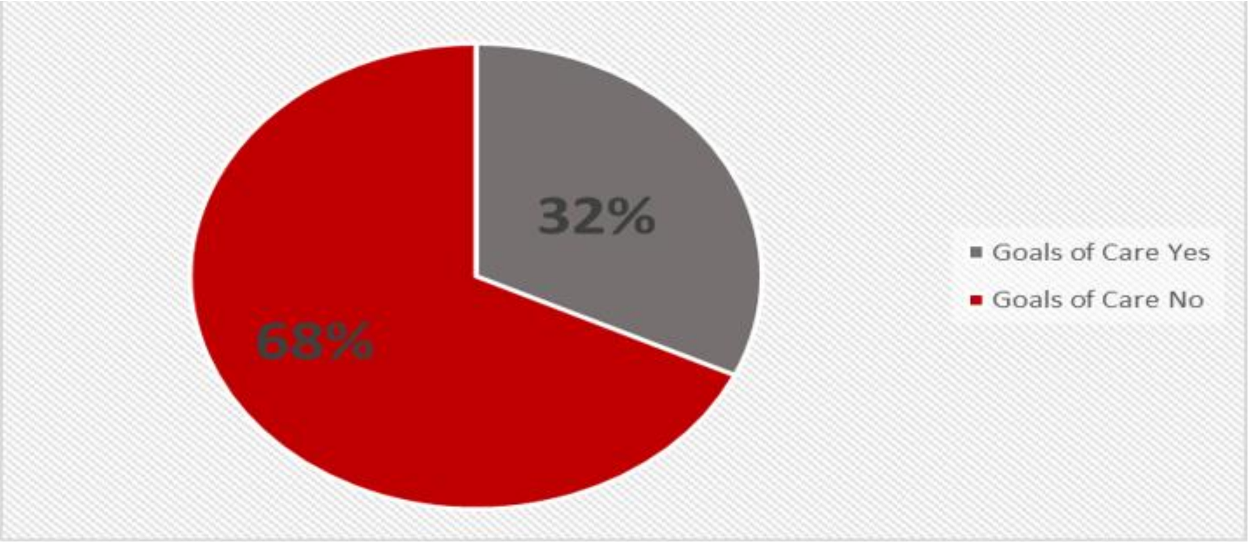


Appendix M. Patient Outcome & Outcome of Discharge

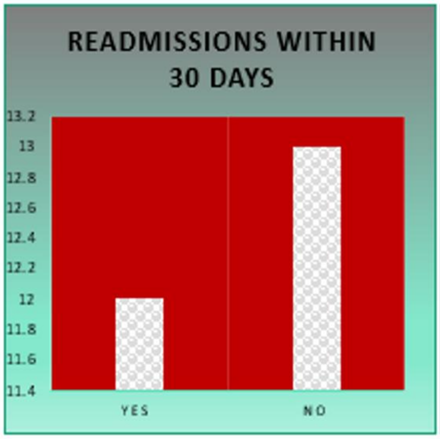


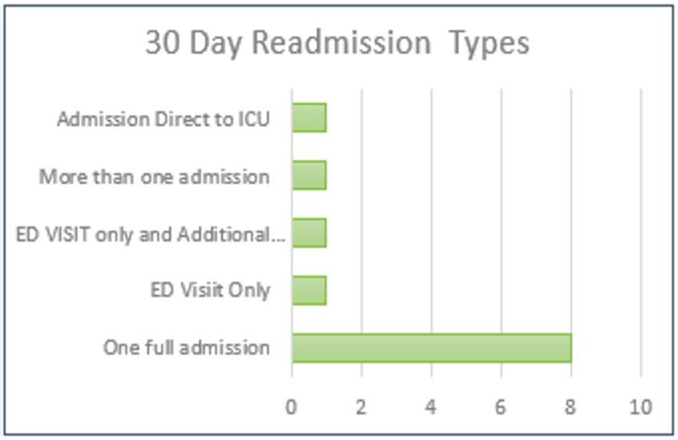


Appendix N. Goals of Care Established

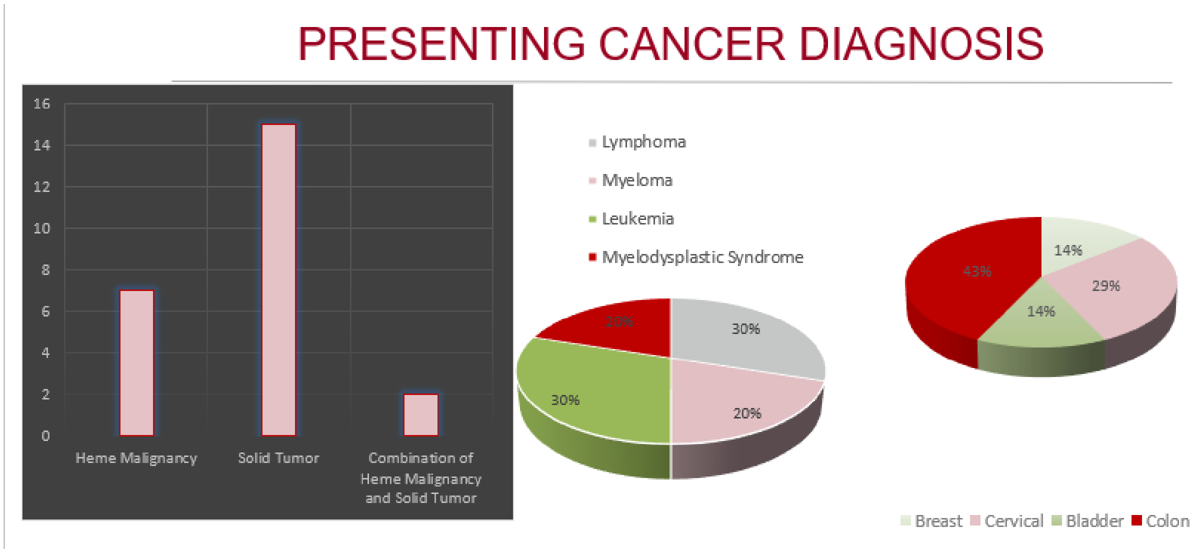


Appendix O. Readmissions within 30 days



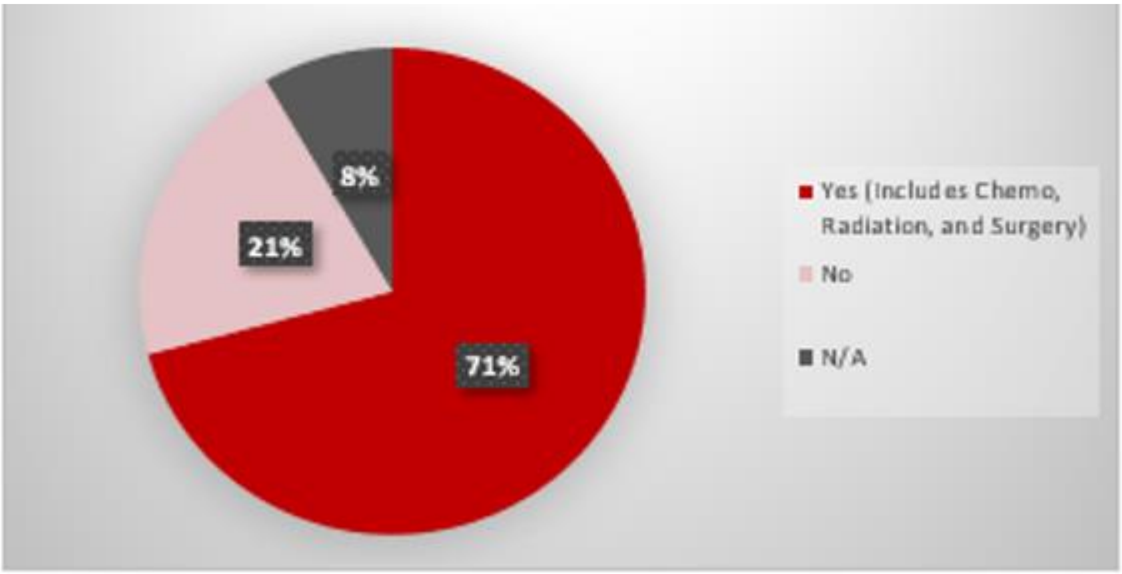


Appendix P. Types of Malignancy

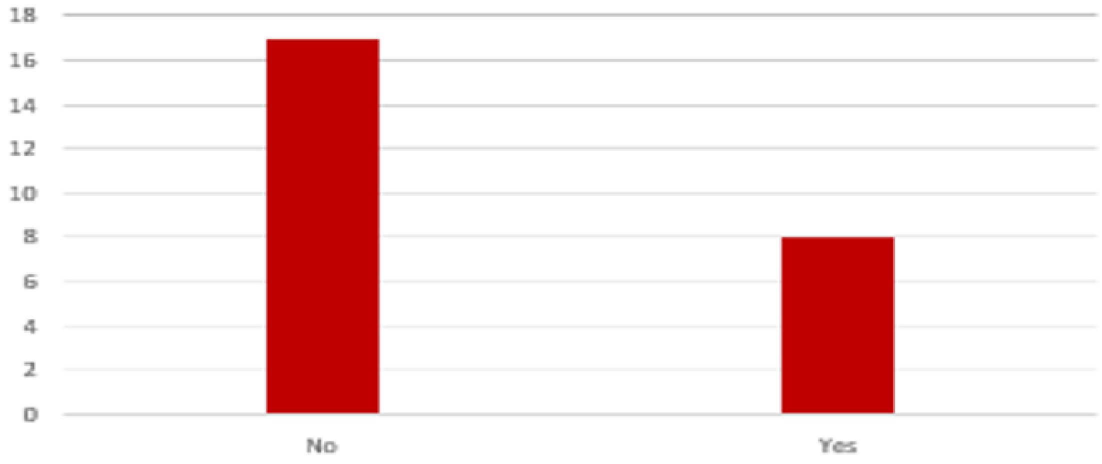


PRESENTING CANCER DIAGNOSIS

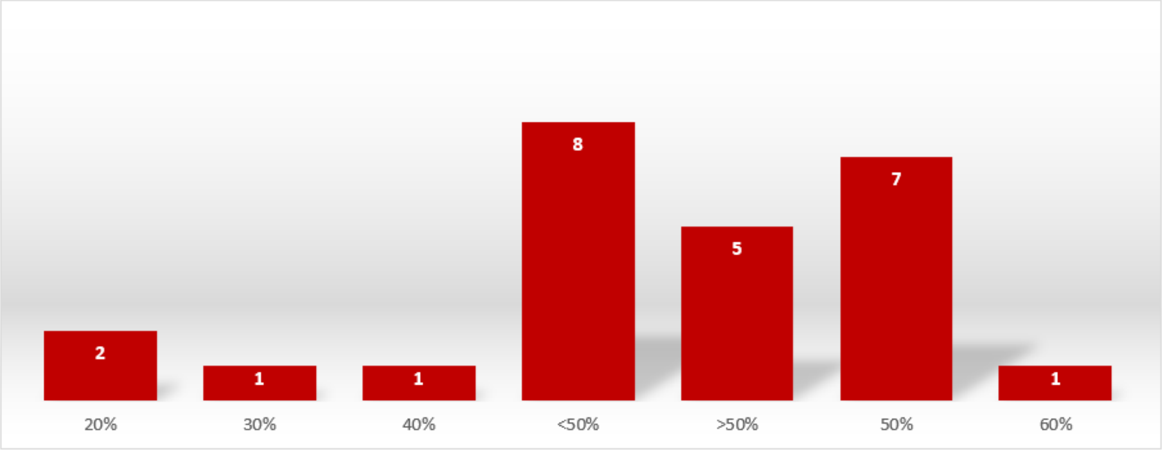
Appendix Q. Patient in Active Treatment



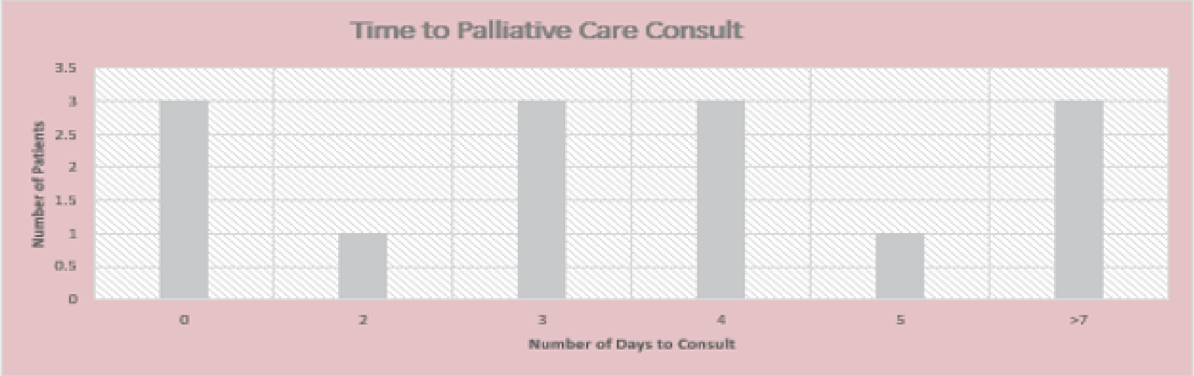
Appendix R. Advanced Directives



Appendix S. Karnofsky Performance Scores

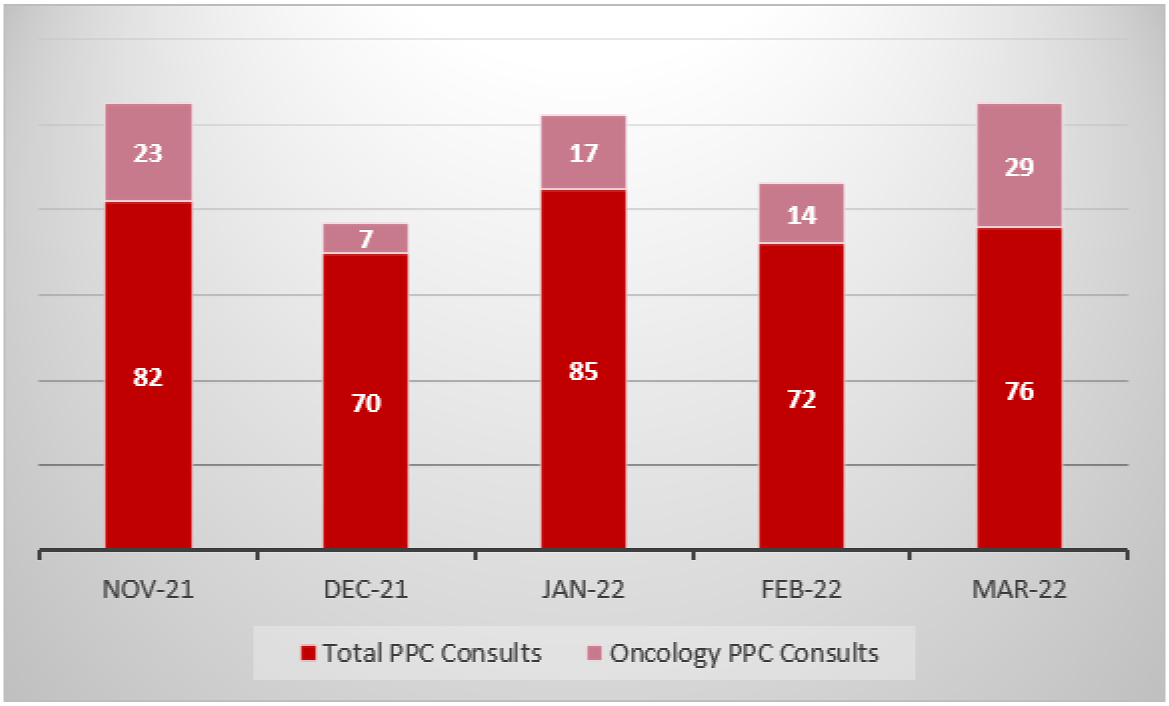


Appendix T. Time to Palliative Care Consult

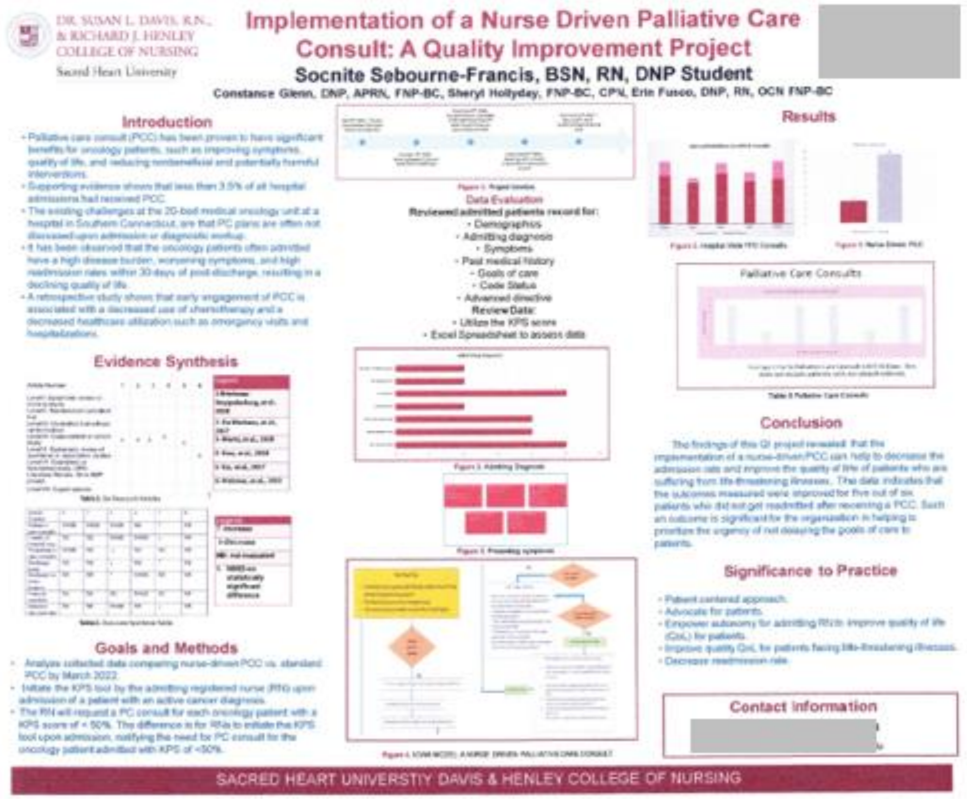


Average time to Palliative Care Consult 6.07143 Days. This does not include patients with no consult ordered.

Appendix U. Hospital Wide Palliative Care Consult



Appendix V. Project Poster



DR. SUSAN L. DAVIS, R.N., & RICHARD J. HENLEY COLLEGE OF NURSING
Sacred Heart University

Implementation of a Nurse Driven Palliative Care Consult: A Quality Improvement Project

[redacted]

Socnite Sebourne-Francis, BSN, RN, DNP Student

Constance Glenn, DNP, APRN, FNP-BC, Sheryl Hollyday, FNP-BC, CPN, Erin Fusco, DNP, RN, OCN FNP-BC

Introduction

- Palliative care consult (PCC) has been proven to have significant benefits for oncology patients, such as improving symptoms, quality of life, and reducing nonbeneficial and potentially harmful interventions.
- Supporting evidence shows that less than 3.5% of all hospital admissions had received PCC.
- The existing challenges at the 20-bed medical oncology unit at a hospital in Southern Connecticut, are that PC plans are often not discussed upon admission or diagnostic workup.
- It has been observed that the oncology patients often admitted have a high disease burden, worsening symptoms, and high readmission rates within 30 days of post-discharge, resulting in a declining quality of life.
- A retrospective study shows that early engagement of PCC is associated with a decreased use of chemotherapy and a decreased healthcare utilization such as emergency visits and hospitalizations.

Evidence Synthesis

Goals and Methods

- Analyze collected data comparing nurse-driven PCC vs. standard PCC by March 2022.
- Initiate the KPS tool by the admitting registered nurse (RN) upon admission of a patient with an active cancer diagnosis.
- The RN will request a PC consult for each oncology patient with a KPS score of < 50%. The difference is for RNs to initiate the KPS tool upon admission, notifying the need for PC consult for the oncology patient admitted with KPS of <50%.

Data Evaluation

Reviewed admitted patients record for:
- Demographics
- Admitting diagnosis
- Symptoms
- Past medical history
- Goals of care
- Code Status
- Advanced directive

Review Data:
- Utilize the KPS score
- Excel Spreadsheet to assess data

Results

Palliative Care Consults

Conclusion

The findings of this QI project revealed that the implementation of a nurse-driven PCC can help to decrease the admission rate and improve the quality of life of patients who are suffering from life-threatening illnesses. The data indicates that the outcomes measured were improved for five out of six patients who did not get readmitted after receiving a PCC. Such an outcome is significant for the organization in helping to prioritize the urgency of not delaying the goals of care to patients.

Significance to Practice

- Patient centered approach.
- Advocate for patients.
- Empower autonomy for admitting RNs to improve quality of life (QoL) for patients.
- Improve quality QoL for patients facing life-threatening illnesses.
- Decrease readmission rate.

Contact Information

[redacted]

SACRED HEART UNIVERSTIY DAVIS & HENLEY COLLEGE OF NURSING