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Hazel Torres University of St. Augustine for Health Sciences

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Making Wishes Known:

An Evidence-Based Practice Project for Advanced Care Planning in Oncology

Hazel Torres, MN, RN

School of Nursing, University of St. Augustine for Health Sciences

This Manuscript Partially Fulfills the Requirements for the

Doctor of Nursing Practice Program and is Approved by:

Sheri Jacobson, PhD, RN

Xam L. Tometich, DNP, RN, NEA-BC

Approved: April 10, 2022

University of St. Augustine for Health Sciences DNP Scholarly Project Signature Form

for Advanced Care Planning
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Abstract

Practice Problem: An advance directive is a tool that patients use to maintain control of their care, plan for potential life events, identify their health proxy and communicate their wishes with their healthcare team. Despite the stated importance, the percentage of patients with completed advance directives in the Oncology clinic was less than 10%. This meant that the majority of patients did not have the tools to make their wishes known to the healthcare team.

PICOT: The PICOT question that guided this EBP project is *In adult oncology patients within the outpatient setting, does implementing a formal advanced care planning (ACP) process as compared to usual practice affect completion of advance directives over 8 weeks?*

Evidence: Evidence revealed that incorporation of the ACP process into patient interactions by members of the healthcare team increase patients' completion of advance directives. EMR documentation is evidenced to provide the team with ease of use and ability to track the ACP process.

Intervention: The project incorporates the ACP process into patient interactions with the staff. Incorporation of the ACP process and completion rates for advance directives are drawn from EMR data.

Outcome: There was no statistical difference in the percentage of patients who had advance directives after four weeks. However, the project highlights how nurses in ambulatory care affect metrics associated with quality outcomes through patient advocacy. Furthermore, the project provides a process for nurses to provide their patients the resources they need to take control of their care. The project will be sustained because of the clinical significance.

Conclusion: A formalized ACP process improves ambulatory nursing care by providing patients with resources to make their wishes known.

Making Wishes Known:

An Evidence-Based Practice Project for Advanced Care Planning in Oncology

Cancer is one of the most devastating disease conditions in the United States (Centers for Medicare & Medicaid Services [CMS], n.d.). According to Epstein et al. (2019), "...no measure of the quality of cancer care is more important than the concordance of care with the patient's core health-related values" (p. 72). Advance care planning (ACP) is a process that provides the patient a means to communicate their values, wishes, and goals with their healthcare team (Bestvina & Polite, 2017; Bires et al., 2017; Brinkman-Stoppelenburg et al., 2014; Epstein et al., 2019; Hamilton, 2020). Despite the benefits, the percentage of oncology patients that have completed the elements of ACP is still not significant (Bires et al., 2017; Waller et al., 2019). Moreover, without documentation of advance directives, the benefits of having the ACP conversations does not get realized (Waller et al., 2019).

Nurses who work with oncology patients are well-positioned to enhance ACP efforts (Epstein et al., 2019). Nurse-led interventions have been shown to increase patients' comfort in having ACP conversations, improve overall patient satisfaction and documentation of advance directives (Epstein et al., 2019; Hoverman et al., 2017). The following manuscript elaborates on the implementation of an evidence-based practice (EBP) project for nurses to help increase completion of advance directives by using ACP process.

Significance of the Practice Problem

Epstein et al., (2019) wrote that "...failure to align treatment with [patients'] values is viewed as a medical error" (p. 72). ACP provides healthcare systems the mechanism to know the patients' values and provide patient-centered care (Bires et al., 2017; Epstein et al., 2019).

Advance directives that come out of ACP provide the healthcare team with clear direction on how to align the treatment plan with what the patients' desire (Hoverman et al., 2017).

Impact to Outcomes

There is significant evidence to highlight the benefits of ACP. Advance care planning has been shown to extend the patients' autonomy, reduce the patients' and families' anxieties, and increase alignment with the patients' end-of-life wishes, thereby improving overall patient satisfaction (Brinkman-Stoppelenburg, 2014). Hamilton (2020) wrote that "...improving patient experience has an inherent value to patients and families and is therefore an important outcome in its own right" (p. 8). Patients who complete their advance directives after ACP have been shown to choose less-aggressive care and still receive higher quality care (Hoverman et al., 2017). Furthermore, completion of advance directives through ACP has been associated with improved patient experience, important financial indicators and improved clinical outcomes (Hamilton, 2020).

Among patients diagnosed with cancer, having clear documentation of their care preferences is even more critical. In previous decades, care provided to cancer patients especially at the end-of-life have led to increased health costs that are inversely proportional to their benefit (Waller et al., 2019). Many cancer patients receive painful aggressive therapies at the end of life including unnecessary hospital admissions and demise (Waller et al., 2019). Such experiences could be prevented by having advance directives and alignment to the documented patients' wishes (Waller et al., 2019).

Standards of Care

In 2013, the Institute of Medicine (IOM) cited ACP as an important quality indicator in the provision of care for oncology patients (Levit et al., 2013). Professional organizations, such

as the American Society of Clinical Oncology (ASCO), advocate for the implementation of ACP as a standard of care for oncology patients (Narang et al., 2015; Peppercorn et al., 2011). In response, Centers for Medicare & Medicaid Services [CMS] (2016) developed the Oncology Care Model (OCM) that, in part, required ACP in oncology patients for hospital systems to be paid for services to their oncology population.

Current Practice

The organization for the project recognized the importance of ACP in all aspects of care provision especially with the oncology patients. The current practice around ACP involves conversations with providers at random points in the continuum of care. The nurses who work in the oncology department are not active participants in the ACP process. There is no data to capture how the ACP process leads to completion of advance directives. The percentage of adult oncology patients with completed advance directives in their EMR has been around 10% for the past two years.

PICOT Question

The PICOT question that guided this EBP project is *In adult oncology patients within the outpatient setting, does implementing a formal advanced care planning process as compared to usual practice affect completion of advance directives over 8 weeks?*

The population of interest were adult oncology patients 18 and older who are seen at the outpatient Oncology Clinic of the practicum site. The population included patients who do not have documented advanced directives or Physician Order of Life Sustaining Treatment (POLST) in their EMR. This included all patients seen at the clinic regardless of the type of cancer diagnosis and the time they were diagnosed. The intervention involved the implementation of the ACP process into patient interactions. There is currently no specific process utilized in the

oncology department to increase completion of advance directives. The usual practice for the medical center involves unstructured conversations between the patient and their providers at random points of their diagnosis. The outcome measurement was the percentage of patients with completed advance directives in their EMR. The timeframe for the implementation is four weeks.

Evidence-Based Practice Framework and Change Theory

Melnyk and Fineout-Overholt (2019) related the importance of using models for EBP and change to successfully implement an EBP practice change. The Johns Hopkins Nursing Evidence-Based Practice (JHNEBP) model was incorporated as the EBP model and Kotter's 8step process for leading change was used for the project.

Johns Hopkins Nursing Evidence-Based Practice Model

The JHNEBP model provides steps that can align evidence with practice (Dang & Dearholt, 2017). This model was selected for the project implementation for its streamlined approach to problem-solving and practical application. The model involves the three steps: practice question, evidence, and translation (Dang & Dearholt, 2017).

Following the JHNEBP model, the next steps were to review the best available evidence around ACP and how it affected completion of advance directives. The evidence in the literature serves as the foundation for the changes to nursing care related to the EBP project.

Kotter's Change Model

Kotter's change model includes eight steps to accelerate change used to implement the EBP project. Kotter's model outlines two fundamental reasons that drive change: to increase revenue or reduce costs, and become more effective or efficient (Kotter, 2020). As connoted by Kotter's model an eight-step process leads to change: 1) create a sense of urgency, 2) build a

strong coalition, 3) form a strategic vision, 4) enlist a volunteer army, 5) enable action by removing barriers, 6) generate short-term wins, 7) sustain acceleration, and 8) institute change.

Kotter's 8-step model fit well with the organization's current culture. The organization has a culture that encourages innovation and practice changes, and involvement of key stakeholders in developing any change project's mission. The organization's leadership understood that the success of change projects involves active participation from the nurses and other members of the healthcare team. They also recognized that their role as leaders is served by removing barriers and celebrating early wins with the staff and the patients. The leaders appreciated that successful practice changes are ones that are sustained and yield long-term results for the patients as well as meeting objectives for the organization.

Evidence Search Strategy

The databases used for the literature search were CINAHL, PubMed and OVID. These databases were used because of their availability from the University of St. Augustine (USA) Library as well as that of the implementation site. The MESH search phrases used were (oncology OR cancer OR neoplasm) AND (advance* care plan* OR advance* directive OR code status) AND (electronic medical record OR electronic health record OR EMR OR EHR) AND (code status OR documentation OR completion). Inclusion criteria were research articles with all adult population. Filters were applied to narrow the search to peer-reviewed articles published in the English language. The search was not limited to full text articles only to ensure that all articles that met the criteria were reviewed. The search time frame used was from 1995 to current; this was to ensure that relevant articles published earlier could be appraised for inclusion in the body of evidence. The strategy included ancestry search of articles that were initially reviewed. Excluded from the evidence reviewed were articles that cited strategies that did not

include EMR processes, those conducted in the inpatient areas such as the intensive care units (ICU) or emergency departments (ED) and studies pending results. The PRISMA diagram is included in the appendix as Figure 1.

Evidence Search Results

The search strategy indicated above yielded a total of 234 abstracts that were reviewed. The inclusion and exclusion criteria were used to further evaluate the abstracts to ensure appropriateness. From these abstracts, 26 articles emerged as meeting the set criteria relating to the EBP project. There were five duplicate articles which narrowed down the number of articles reviewed to 21. Upon further review, 12 of these articles were not included in the evidence appraisal. Some of these excluded articles did not specify the EMR intervention implemented, had outcomes associated with patient engagement or clinician confidence, or had ongoing data collection or analysis. Five more articles were included after conducting a manual search of included references in the articles. Ultimately, there are 14 articles included in the body of evidence used to guide the EBP study process. The evidence tables with the included articles, their level and quality are included as (Appendix A and B) of the proposal.

Four of the articles are included in the evidence are systematic reviews. The number of articles included in the systematic reviews ranged anywhere from 15 to 113. Overall, there were a combined 161 articles between the systematic reviews.

There are ten primary source evidence articles that are included in the evidence review. Of these, there were two articles that were published before 2010. The decision to include these articles despite their age was made because of how they were cited multiple times in the other articles.

The JHNEBP Evidence Level and Quality Guide tool (Dang & Dearholt, 2017) was used to appraise the articles included in the evidence. There was one level I article, seven that were level II and six that were level III. There were 10 articles that had high quality, generalizable findings, three that were good quality and one article that was low quality.

Overall, the evidence included articles that were randomized and non-randomized, quasiexperimental and non-experimental. The overall quality of the evidence is high with results that have statistically significant implications. Using the Strength of Recommendation Taxonomy (SORT) definitions (Ebell et al., 2004), the body of evidence from the literature search was level 1 as it has good-quality patient-oriented evidence. Therefore, using the same SORT definitions by Ebell et al. (2004), the strength of recommendation is A as it was based on consistent and good-quality patient-oriented evidence.

Themes with Practice Recommendations

The evidence review revealed several themes around using a structured process such as ACP, leveraging EMR capabilities, and involving members of the interprofessional team other than physicians.

Advance Care Planning

Advance Care Planning (ACP) provides clinicians with a process to have conversations that are otherwise challenging even for experienced practitioners (Hoverman et al., 2017; Neubauer et al., 2015; Obel et al., 2014; Paladino et al., 2019; Temel et al., 2013; Tung et al., 2011; Turley et al., 2016). ACP has been found to increase documentation of advance directives and code status in the patients' chart (Hoverman et al., 2017; Neubauer et al., 2015; Obel et al., 2014; Paladino et al., 2019; Temel et al., 2013; Tung et al., 2011; Turley et al., 2016). Other

outcomes associated with the incorporation of ACP in oncology care included improved patient and staff satisfaction (Hamilton, 2020).

Leveraging EMR Capabilities

EMR enhancements and capabilities have increased completion of advance directives or documentation of code status (Hayek et al., 2014; Hoverman et al., 2017; Lindner et al., 2007; Neubauer et al., 2015; Obel et al., 2014; Paladino et al., 2019; Temel et al., 2013; Tung et al., 2011; Turley et al., 2016); in majority of the studies, the difference has been statistically significant (Lindner et al., 2007; Paladino et al., 2019; Temel et al., 2013; Tung et al., 2011; Turley et al., 2016). Various ways on how the EMR has been utilized to improve completion of advance directives and code status documentation include the use of alerts and documentation templates (Neubauer et al., 2015; Obel et al., 2014; Paladino et al., 2019; Temel et al., 2019; Temel et al., 2010; Temel et al., 2013; Tung et al., 2011; Turley et al., 2013; Tung et al., 2011; Turley et al., 2014; Paladino et al., 2019; Temel et al., 2019; Temel et al., 2010;

Healthcare Team

Several articles in the evidence search referenced the roles of members of the health care team in achieving documentation of advance directives (Hoverman et al., 2017; Lindner et al., 2007; Neubauer et al., 2015; Obel et al., 2014; Paladino et al., 2019; Temel et al., 2013; Tung et al., 2011; Turley et al., 2016). Hoverman et al. (2017) wrote of the RN role in initiating ACP conversations in improving completion of advance directives by implementing the values assessment. Obel et al. (2014) noted how nurses and members of the health care team other than just physicians who were instrumental in increasing completion advance directives by initiating and providing follow-up on ACP.

Multiple Interactions

All articles included in the synthesis referenced multiple interactions with patients to bring about desired outcomes (Hayek et al., 2014; Hoverman et al., 2017; Lindner et al., 2007; Neubauer et al., 2015; Obel et al., 2014; Paladino et al., 2019; Temel et al., 2010; Temel et al., 2013; Tung et al., 2011; Turley et al., 2016). Interactions from the healthcare team occurred before the initial appointment (Hoverman et al., 2017; Neubauer et al., 2015; Paladino et al., 2019), at the beginning of the initial appointment (Hayek et al., 2014; Lindner et al., 2007; Temel et al., 2013), and days or weeks after the initial conversation until documentation of advance directives or code status (Neubauer et al., 2015; Obel et al., 2014).

Recommendations

The review of the literature answered the PICOT question affirmatively; in other words, in adult oncology patients, the incorporation of a formal ACP process in the nurses' interaction increased the documentation of advance directives in comparison to usual care.

Based on the overall review of the literature and a rigorous synthesis of the evidence, there are a few recommendations to address the identified practice problem. These recommendations were incorporated into the EBP project. The steps of the project involves 1) incorporation of ACP by the nurses in interactions with patients who meet criteria, 2) acknowledgement of EMR alert, 3) use of template to document ACP into EMR, and 4) involvement of members of the healthcare team other than the physicians to make changes in practice. The steps of the EBP project are included (as Appendix C).

Incorporation of ACP

The recommendation is for ACP to be incorporated into the Oncology clinic nurses' interaction with the patients. This includes an overview of the importance of having completed

advance directives, the importance of identifying a healthcare decision maker, and information on resources around ACP that the patient can access (e.g. workshops, website).

EMR Alert and Documentation Template

It is recommended to use the EMR alerts to prompt clinicians to address oncology patients who do not have any advance directives on their charts yet. It is also recommended for the EMR to be organized so the physicians and other members of the healthcare team could use a documentation template to capture any conversations related to ACP and advance directives.

Engagement of Health Care Team

The EBP project involves engagement of members of the healthcare team beyond just the physician to improve completion of advance directives. Nurses could be involved by incorporating ACP into their patient interactions, directing patients to ACP resources, and providing follow up with patients and physicians for incomplete documentation of advance directives.

Setting, Stakeholders, and Systems Change

The organization in which the EBP change project occurred is a service area of a large integrated health system in southern California. The health system integrates hospital services with that of the medical group and health plan. It also provides care across the continuum from in-patient, outpatient and home health services. The organization's mission is to provide high-quality affordable healthcare that is accessible to its patients and provided with a personal touch (Kaiser Permanente, n.d.). The project was implemented in the outpatient Oncology clinic. This project was implemented in the department with participants being adult oncology patients without advance directives or POLST on record.

The organization takes great pride in its interprofessional collaboration and their collective focus in making improvements in their care delivery. Organizational leaders recognized the need to improve documentation of advance directives and incorporate ACP into oncology. Early consultation with the chief nursing officer (CNO) was employed to start identifying stakeholders for successful implementation. Aside from the CNO, other stakeholders identified were physician leaders, the local expert for ACP, department manager or department administrator (DA), regional consultant for ACP, frontline staff, information technology (IT) consultant and workflow consultant. Organizational support was confirmed by having a combined meeting with the stakeholders as previously noted.

The sustainability plan involves the incorporation of the recommended process into the nurses' current practice of the department. Incorporation of ACP into existing practice helps ensure that this is regarded as an improvement effort for better outcomes. Involvement of the local ACP expert and a regional consultant ensure that the project is sustained with both local and regional leadership support. Challenges that may involve technical aspects involving the IT infrastructure, EMR and workflow can be escalated, addressed and managed by the IT and workflow consultants who are assigned at the medical center. A significant aspect of the sustainability plan involves the engagement and empowerment of the front line staff. The staff is given the appropriate education and training along with the assurance of a network of support for the success of the project. The success of the project relies heavily on participation of members of the interprofessional team. The complexity of care involved with oncology patients requires several conversations and interactions with different members of the interprofessional team over a period of time. It is critical that all members of the team know of the importance of ACP and the role they play to keep the messaging and care consistent for the patients. A SWOT analysis

was conducted as part of the organizational assessment. The SWOT analysis is attached in the proposal (as Appendix D).

The EBP project involved changes at several points in the system. At the macro level, the EBP project required a change in the culture and mindset on the role everyone could play in improving rates of completion of advance directives. Completion of advance directives should now be considered an interprofessional team goal instead of just that of the physicians. At the department level (meso), the change involved how the staff incorporates ACP into their interactions with oncology patients. The change also involved staff getting comfortable with having these type of conversations while still referring the patients to their physicians for any specific questions related to prognosis and treatment. Changes at the micro level involved the using the EMR section for ACP and a documentation template.

Implementation Plan with Timeline and Budget

The vision of the project was to increase the percentage of documentation of advance directives among adult oncology patients in the clinic by incorporating ACP into current patient interactions. The long term goal for the project was this: At the end of four weeks, the percentage of adult oncology patients seen in the clinic with advance directives in their EMR would increase by 50% from baseline. Short term goals are reflected as milestones in the project's timeline (Appendix E). The objectives of the project were: 1) staff review of patients' EMR for advance directives, 2) incorporation of the ACP process into patient interactions, and 3) documentation of the process into the EMR using a template.

Project Details and Kotter's Model

The details of the project were outlined to align with each step of the Kotter's model. The initial step involved a presentation of the project that outlined the problem and the

recommendations from the evidence. The presentation included baseline information on percentage of oncology patients with no documented advance directives in their EMR. The goal of the initial presentation was to get leadership approval and stakeholder buy-in to move forward with the project. The representatives from the stakeholders present during the proposal pitch verbalized their support and approved to move forward with the plan.

After the leadership approval, the approval from the Institutional Review Board (IRB) was sought and team members from stakeholder groups were identified. Once members from the stakeholder groups were identified, the important next step was to bring them together to engage them in the process and implementation itself. It is at this stage of the change process that stakeholder roles were clarified. The team developed a project charter that included the overall project's vision, scope, long and short-term objectives, and the workflow for the proposed change. The staff implementing the EBP project were educated on why the current practice needed to change and how the EBP changes needed to occur. An outline of the presentation to the staff is included as Appendix F.

Potential barriers to the project were identified; these included time and financial constraints, sudden changes in organizational priorities such as natural disasters, and leadership or staff changes. Regular communication with the nurses through weekly touch points provided information on any barriers and also monitor the project's progress. The same meetings were the forum to evaluate process measures, discuss any key learnings and celebrate any short-term wins. Real-time feedback to the nurses especially during the initial stages of the change was provided to ensure the acceleration of the right practices while clarifying any confusion. Real time-feedback also provided an avenue to celebrate wins and keep the project momentum going. After four weeks, the data collected was organized and analyzed to draw the overall project

evaluation. The data was reviewed and compared to that at baseline. The information will then be presented to the stakeholders for their feedback and continued support. It is during this time that a handoff process is started between the project manager and the identified lead who will continue to oversee the process.

Interprofessional Team

The success of the project lies in ensuring that there is representation of thought from different members of the interprofessional team. The project manager involved people from several disciplines and professions beginning at the stakeholder conversations to the weekly meetings. The members of the interprofessional team included leaders from the department and the medical center, the providers in the department, the staff incorporating the ACP conversations in their patient interactions, the regional consultant, and the other clinic staff such as medical assistants (MAs) and licensed vocational nurses (LVNs).

Resources

The goal for the project was to keep it budget neutral. Table 1 outlines how the project implementation may have financial impact specifically to human resources. Time that the team dedicated to the project was associated with dollar amount of salary and benefits. However, it was not expected for this time to be over and beyond what is normally expected of the team. The student assumed the project manager role during the implementation so there was no associated cost to the department. The change in the practice involved the incorporation of the ACP conversation into existing interactions or visits the RN has with the patient. The addition was not expected to significantly impact the RNs time to warrant overtime pay. With stakeholder support, the time spent by the consultant, educator, informatician and quality coordinator was assumed available towards the project's success.

Project Management

Project management was assumed by the student involved in the EBP change. A local leader has been identified for the sustainability of the project.

Results

The EBP project proposal was sent to USAHS EPRC committee for approval. The approved project proposal was then submitted to the organization's IRB for an expedited review. The support from the practicum site was secured from the CNO of the practicum site after IRB approval.

The project was conducted at the outpatient Oncology clinic of the practicum site over four weeks. Participants of the project were adult patients 18 years and over who did not have advance directives or POLST documented in their EMR. Therefore, patients with documented advance directives or POLST were not be included in the project. The EBP change involved the staff incorporating the ACP process into the interactions with patients who met the criteria. The data was captured directly into the patients EMR. The project manager did not require access to patient information nor store data separately thereby maintaining confidentiality throughout the project.

The project's outcome measure was the percentage of patients with documentation of completed advance directives. The project utilized data that was already being collected by the quality and analytics department. The analysts who previously performed the data abstraction from the EMR were able to support the project while maintaining their routine processes. Baseline data of the percentage of adult oncology patients with documented advance directives or POLST was gathered from the EMR data sets prior to implementation.

Data Analysis

Prior to the project implementation, 905 out of the 3,971 patients had documented advance directives or POLST. At the end of the implementation, there were 882 out of 4,122 oncology patients with completed advance directives or POLST; this was a decrease from the pre-implementation data. Using the unpaired *t*-test at the *p* value of ≤ 0.05 , the difference between the pre- and post-implementation data is not statistically significant (see Table 2 and 3). Further analysis was performed to identify possible factors that affected the data. One thing to note is the increase in the population of patients from the previous month; this increase perhaps affected the percentage value by increasing the denominator. The department managers and hospital leaders shared how the number of patients seen in the Oncology clinic have been rising. This could be further attributed to the organization's commitment to proactive care and early identification of cancer. On the other hand, the decrease in the actual number of patients with advance directives may have been influenced by contextual factors such as participant demise, change of condition or hospitalization.

Aside from the overall outcome, the project manager utilized process, balancing, financial, and sustainability measures. During the project implementation, the process measure showed that the staff incorporated the ACP process into their patient interactions 124 times. Financial measure did not show overtime hours nor overtime pay incurred by the staff associated with the EBP change. Sustainability measure would involve monitoring the percentage of patients with completed advance directives or POLST every month after initial intervention. Table 4 in the Appendix provides details at a glance on how these measures were retrieved and when.

Clinical Significance

Perhaps the most important outcome from the project was in its clinical significance to both nursing practice and patient outcomes. This project highlighted the important role of nurses in ambulatory care in patient advocacy. This in-turn also showed how nurses affect metrics associated with quality outcomes. The staff who participated verbalized an understanding on how important their role was not just in addressing current needs but also in helping the patients be actively involved in planning for their future. The staff verbalized how supported they felt about having an interprofessional team to refer the patient for questions that might need further explanation or conversation.

Ultimately, the clinical significance of the project was in helping oncology patients understand the importance of identifying their wishes and making them known to their family and their healthcare team. A documented advance directive is a way that the patients maintain control over their health and bodies at a time where most events occur without it (Epstein et al., 2019). Although the data does not reflect an associated increase in completed advance directives, the interactions with ACP process provided the patients the resources they need to make their wishes known and take control of their care.

Impact

The EBP project aimed to address the problem of having low percentage of oncology patients with documented advance directives. The evidence supported the use of the ACP process in addressing this problem (Hoverman et al., 2017; Neubauer et al., 2015; Obel et al., 2014; Paladino et al., 2019; Temel et al., 2013; Tung et al., 2011; Turley et al., 2016). For this specific EBP change project, the intervention did not result to an increase in documentation of advance directives in the EMR.

Sustainability

It is important to refer to the body of evidence to ensure sustainability of the change in practice. The incorporation of the ACP process in the outpatient setting by several members of the healthcare team on multiple patient interactions increase the documentation of advance directives that ultimately improve patient outcomes (Brinkman-Stoppelenburg, 2014; Hamilton, 2020; Hoverman et al., 2017; Lindner et al., 2007; Neubauer et al., 2015; Obel et al., 2014; Paladino et al., 2019; Temel et al., 2013; Tung et al., 2011; Turley et al., 2016). Although there was no increase in documentation of advance directives in the EMR between the pre- and post-implementation data, there was documentation of the ACP process being utilized by the staff. This supports what Neubauer et al. (2015) wrote on how implementing an ACP process "can set things in motion, but there remains significant room for improvement" (p. e265).

The change in practice can be sustained with consistent messaging on why having documented advance directives is important and how staff contribute to its completion. The leaders and stakeholders appreciate the importance of the EBP change as a key component of oncology care. They agree that practice should continue with no need for additional funding. The project will be sustained using the same steps of the ACP process and documentation template. The data on how often the staff are using the EMR to document the ACP process will continue to be monitored. This data will be used to provide feedback to the staff and how the practice can be consistently adopted into their workflows. The data on the percentage of oncology patients complete advance directives after the ACP process will also be monitored. Ongoing evaluation of measures, staff feedback, and communication will be continued by an identified lead at the local medical center as well as a regional consultant.

Limitations

Several factors affect the documentation of advance directives in the EMR (Bestvina & Polite, 2017; Turley et al., 2016). Neubauer et al. (2015) further posited that increasing documentation of advance directives in the EMR is challenging for multiple reasons. There were several factors that influenced the results of the project. The project timeline was shortened because of changes in operational priorities at the time. Four weeks may not have been enough for patients who did receive the ACP intervention to turn in their completed advance directive or POLST to be uploaded into their EMR. The project was also implemented during a time when the department was severely impacted with staffing shortages in contrast to the increased volume of patients. These perhaps affected how often the staff were able to incorporate the ACP process into their interactions.

Dissemination

Dissemination of any outcomes from the change project is a key component of EBP (Dang & Dearholt, 2017). The dissemination is intended to provide the department with the results from the project implementation, reinforce the need to sustain the project, share the experience with peers, and enhance the learning experience of other DNP leaders.

The results of the project were shared with the stakeholder group through virtual meeting platform. The audience included the CNO, the managers of the department, and a few of the staff. The person who was identified to sustain the EBP project was also in attendance. This presentation included the data from the identified process and overall outcomes. The clinical significance of the project as it related to nursing practice and patient outcomes were highlighted during this presentation. This was a critical aspect of the dissemination in order to reinforce the need for sustainability.

The information related to the EBP project will be shared with peers and colleagues through poster presentation and publication. The poster presentation will focus on the results of the ACP process implementation as well as the EBP process itself. The manuscript will be submitted to the American Academy of Ambulatory Care Nursing (AAACN) for possible publication on *ViewPoint*. Finally, the completed EBP project manuscript will be submitted to USA's SOAR for open access.

Conclusion

The documentation of advance directives of adult oncology patients is a critical component of ensuring the quality of care they receive (Epstein et al., 2019). The intention of this project was to use EBP processes to increase the percentage of patients with completed advance directives reflected in their EMR. ACP is a key component of quality care for oncology patients and will soon be used in value-based payment programs (Levit et al., 2013; Narang et al., 2015; Peppercorn et al., 2011). ACP has also been shown to increase documentation of advance directives (Hoverman et al., 2017; Neubauer et al., 2015; Obel et al., 2014; Paladino et al., 2019; Temel et al., 2013; Tung et al., 2011; Turley et al., 2016). The implementation of a formal ACP process into current practice that leverages the EMR and other members of the healthcare team was recommended to provide the necessary structure to achieve the intended outcomes. Clinical outcomes that improved the care the oncology patients experienced from this project may not be statistically significant but are nonetheless important.

The EBP implementation would require system changes to be successful; the use of a change model such as that of Kotter's can provide guidance so these changes could be achieved. Stakeholder support is not just important to ensure the project is implemented successfully, but is also critical for efforts to sustain improvement (Kotter, 2020). It is also worth noting that a

change project that is based on the best available evidence not only improves patient outcomes but also validates the role of nurse leaders in translating research into clinical practice (Melnyk & Fineout-Overholt, 2019).

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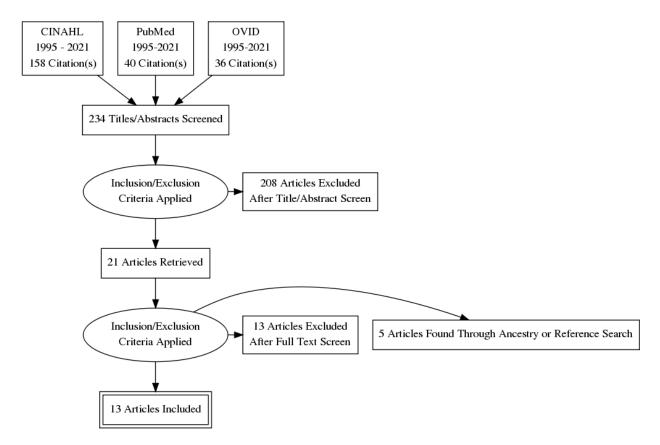
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Figure 1

PRISMA Diagram for Evidence Search



Note. Prisma flow chart diagram from "Preferred Reporting Items for Systematic Reviews and Meta-analyses: The PRISMA Statement," by D. Moher, A. Liberati, J. Tetzlaff, & D. G. Altman, 2009, *Annals of Internal Medicine*, *151*(4), p. 267 (<u>http://dx.doi.org/10.7326/0003-4819-151-4-</u>200908180-00135). Copyright 2009 by The American College of Physicians.

This PRISMA diagram organizes the information revealed with the application of the search strategy. The three databases used were CINAHL, PubMed and OVID. The initial search yielded 234 titles between all three databases. The final number of articles included in the body of evidence is 13.

Appendix A

Summary of Primary Research Evidence

	Citation	Design, Level Quality Grade	Sample Sample size	Intervention Comparison (Definitions should include any specific research tools used along with reliability & validity)	Outcome Definition	Usefulness Results Key Findings
1	Hayek et al., 2014	Pre-post design Level II design High quality	Patients seen in an outpatient setting who are >65 years and with chronic conditions including malignancies, AIDS, and stroke 64 patients	Implementation of an EMR prompt by creating an AD problem list on the patients' chart	Documentation of AD	Charts of patients whose EMR had AD on problem list had more documentation of AD in comparison to those who did not 76% of chart with AD on problem list had AD vs. 11.5% of those without
2	Hoverman et al., 2017	Retrospective study Level II design High quality	Patients with advanced breast, colon, lung, or pancreatic cancer of any stage	Use of a ten- question survey values assessment (VA) that can be initiated over the telephone by a RN; the patients are offered counseling	Completion of AD documents Place of death (hospital or hospice)	Initiation of ACP by the nurse using the ten question VA leads to an increase in completion of AD This study shows the importance of multiple touchpoints from members of the HCT including

3	Lindner et al., 2007	Prospective study design pre- and post- intervention Level II design Good quality	1268 patients Patients admitted to nursing home 224 patients in sample	for completion of AD within the first three cycles Comparison was no VA Authors used the VA questionnaire from My Choices, My Wishes (MCMW). It did not include information about validity or reliability EMR was modified so primary clinician was alerted to the need for completion of AD	Completion of AD	nurses in the completion of AD for oncology patients Completion of AD with statistically significant increase (p < .001) from 4% pre- intervention to 63% post intervention Statistically significant increase in AD completion after
4	Neubauer et al., 2015	Prospective multi-site non- randomized study Level II	Cancer patients from multiple clinics from multiple states with metastatic disease	Implementation of My Choices, My Wishes, with several components: 1) Automated identification of	Documentation of code status	intervention Increase of documentation status in varying percentages across clinic sites No documentation of statistical comparison pre- and post implementation
		Good quality	35,147 patients	patients with metastatic disease;		Study supports EMR multiple approaches to improving AD documentation

5	Obel et al., 2014	Non experimental design Level III	Patients with stage IV cancer Outpatient setting	to EOL care Creation of a new workflow for ACP that included RN participation starting on the 1 st visit;	Documentation of ACP conversation by clinicians Completion of	Increased documentation of ACP (69%) conversation in EMR in study group vs. historical control Increased completion of AD (69%) of study group vs.
		Good quality	48 patients Historical control with deceased patients of the 2 oncologists	Patient education was provided through the use of guidebooks; Training provided to HCT on new workflow and how to conduct ACP; Enhancements to EMR included an ACP navigator that had ACP pertinent information and a consistent place to document in the EMR	AD	historical control
6	Paladino et al., 2019	Cluster randomized trial	Patients at the Dane-Farber Cancer Institute	Included a pre- conversation letter provided to the	Documentation of at least 1 serious illness	More patients in intervention completed documentation vs control (statistically significant)

		Level I design High quality	and 2 affiliated satellite clinics Patients 18 and older where physicians answer "no" to the question "would you be surprised if this patient died in the next year?" 278 patients	patients outlining the approach for continuing the ACP conversation after the patient-clinician discussion Clinicians were sent prompts through email the day before an outpatient visit Clinicians used a EMR documentation template to have the conversation Physicians in the control group provided usual care and did not receive training nor intervention components	conversation before death, (2) timing of the initial conversation before death, (3) quality of conversations, and (4) their accessibility in the electronic medical record (EMR).	There were statistically significant more conversations in the intervention group vs control Intervention resulted in more accessible documentation of patient goals, in the face of life-limiting illness This study showed that multiple touchpoints from the HCT, prompts and documentation templates increase completion of documentation
7	Temel et al., 2010	Retrospective study Level III Low quality	Patients with metastatic solid tumors at an academic cancer center	Implementation of a code status module in the EMR	Documentation of code status	Completion of code status was 20.3% Unable to determine effect of implementation of EMR process; no mention of completion rate
			2,498 patients			prior to implementation
8	Temel et al., 2013	Non- randomized historical control study	Patients seen in the outpatient thoracic oncology clinic	Implementation of email prompts and reminders for patients at the start	Documentation of code status in EMR	More patients with documented code status in email prompt group vs. no prompt

		Level II High quality	100 patients	of new chemotherapy regimen	~ 1	At 1 year, 33.7% of patients seen by clinicians who received email prompts had documented code status compared to 14.5% of historical control group; difference is statistically significant ($p < .003$). Study also revealed that completion of code status was 2 months earlier in the email prompt group compared with historical control
9	Tung et al., 2011	Retrospective pre- and post- implementation study Level II High quality	Older adults seen in primary care clinics 720 patients in sample	Multimodal educational intervention and use of clinical decision support system in EMR to prompt discussion Patients in intervention group received multimodal education and their physicians had prompts in EMR; control group were patients seen by physicians using usual care	Completion of AD	More patients in intervention group completed AD vs control group (statistically significant) 21.6% completion rate in intervention group vs. 4.1% in control group; statistically significant difference ($p < .001$) This study supports using EMR prompts along with other approaches (education) to improve completion of AD

10	Turley et al., 2016	Retrospective pre- and post- implementation analysis Level II	Patients >65 years and older seen in inpatient and outpatient areas	Implementation of AD activity tab in the EMR	Documentation of AD	Significantly more patients with AD activity tab had documentation of AD vs those without Documentation of AD and
		High quality	113,309 patients			POLST were 3.5 to 9.6 percentage points higher in patients where the activity tab was implemented vs those without

Legend:

ACP – Advance care plan

AD – Advance directive

HCT – healthcare team

Appendix B

Summary of Systematic Reviews (SR)

Citation	Quality	Question	Search Strategy	Inclusion/	Data Extraction	Key Findings	Usefulness/Recom
	Grade			Exclusion Criteria	and Analysis		mendation/
							Implications
Polite, 2017	Level III High Quality	Cancer Care Continuum? Who Should Conduct ACP Sessions?	database used Additional articles were identified from manual reference of identified	prospective interventions conducted in outpatient setting Excluded articles that are currently accruing patients or awaiting	design and sample size, intervention and length, person conducting ACP session, patient education, results	to conduct ACP Note template was incorporated into EMR that allowed	Best solution is a combination of multiple providers early in the diagnosis of cancer using a note template in the EMR
			were included 26 total articles included			Having nurses use EMR to start AD and physicians complete resulted with 33 (69%) of 48 patients having a documented advance directive note Prompts to remind physicians to address ACP were incorporated into four of 26 studies; these	

						led to increase from	
						14.5% to 33.7%	
						documentation of	
						code status	
Brinkma	Level	What are the effects	Databases:	Inclusion criteria:	Extracted	Most studies had an	AD tend to be
n-	III	of ACP on end-of-life	PubMed,	1. Articles describe	information	observational design	related to an
Stoppele		care?	EMBASE and	empirical study on the	included study	Research on the	increased frequency
nburg et	High		PsycINFO		0	outcomes of ACP	in out-of-hospital
al., 2014	Quality			planning'	(observational or	most commonly	care
			English language	2. Studies concern	1 //		The interventions
				quantitative research	study setting,	advance directives	noted in the SR
			January 2000 to	3. Outcomes include	number of	Considerable	were on different
			December 2012	a. Effects on medical	patients studied,	variance in the types	levels of ACP; no
					• • • • •	of outcomes studied	specific notation if
			113 studies	phase of life, including	of outcome		or how EMR was
			included	1	measures and		used to facilitate
				L	results		these conversations
					and conclusions.		
				ii. Medical treatment			
				and care (including use			
				of life-sustaining			
				treatment, hospice and			
				palliative care)			
				iii. Hospitalisation,			
				hospital length of stay			
				and place of death.			
				b. Effects on quality of			
				life and patients' and			
				families' satisfaction			
				with care			
				c. Effects on patients'			
				and families'			
				prevalence and/or			
				severity of symptoms			

				 4. Both intervention and observational studies with control group 5. Studies published on paper in English between January 2000 and December 2012 Exclusion criteria: Studies in which advance care planning is only part of a more complex intervention, for example, studies on the effect of palliative care consultation teams Studies on children Studies on psychiatric patients Studies on hypothetical situations (e.g. vignette studies) Studies solely on effects on costs of care, on (understanding) patients' preferences or on completion of advance care planning documents 			
Huber et L		What is the efficacy		Included all studies of		Study populations,	There is evidence
al., 2018 I	II	of the use of EHR components to	PubMed/MEDLI NE, the Cochrane		included the study setting, study		of increased ACP documentation
			rt, nie Coemane		security, study		uocumentation

	High	improve ACP	Central Register	relation to ACP;	design, patient	outcomes were	associated with
	0	documentation in	U		0 1	heterogenous	EMR interventions.
		certain populations?			and non-EMR		
		· · · · · · · · · · · · · · · · · · ·				Majority of studies	Evidence suggests
			- ·		,	5 5	that improving
			,	,	outcomes	components within	ACP has
				included.		the context of broader	
			Abstracts			efforts to improve	leveraging EMR;
				Excluded articles that		ACP. Five studies	successful
			16 articles	did not report		indicated ACP	interventions
				intervention or reported			usually include
				only on conceptual		were limited to	other interventions
				planning; comments,		changes in EMR.	such as education
				editorials, conference		Other modalities	of clinicians or
				proceedings, and case		include patient	patients.
				reports		education and staff	*
				•		education.	
						EMR interventions	
						included	
						documentation	
						templates, order sets,	
						and automated	
						prompts	
		Do EMR improve				Electronic reminders,	· ·
<i>'</i>	III	AD documentation?	PubMed,		•	templates, decision	templates and
2019			PsycINFO,		1 ,	aids and standard	decision aids can be
	High		EMBASE, and			location in the EMR	useful with ACP
	quality		CINAHL	-	1 1 /	can increase	overall. Additional
					1	documentation rates	support through
			English language		J	of ADs.	training may be
					control groups,		needed to improve
					and effects on AD		AD documentation
					documentation		

Legend:

ACP – Advance care plan

AD – Advance Directive

EMR – Electronic medical record

Appendix C

Steps of ACP in Oncology Process

- 1. At the beginning of the patient interaction, the nurse checks the patient's EMR for completed advance directive or POLST. No further action needed if an advance directive or POLST is present
- 2. If there is no completed advance directive or POLST in the EMR, the nurse acknowledges the EMR alert for *No Advance Directives*
- 3. The nurse addresses the lack of advance directives with the patient and covers the following points:
 - a. The importance of having an advance directive in the EMR
 - b. The importance of having a healthcare proxy and how to identify one
 - c. The resources available to the patient (print and web) with information on ACP and how to complete the advance directives
- 4. The nurse uses the EMR template to document the conversation with the patient
- 5. At the next patient interaction (minimum of two weeks after the initial intervention), the nurse reviews the EMR for completed advance directive. No further action needed if an advance directive is present.
- 6. If there is no completed advance directive in the EMR, the nurse documents the lack of advance directive and notifies the oncologist of the need for follow up

Appendix D

SWOT Analysis

STRENGTHS	WEAKNESSES
 EBP project has strong leadership support from physician, nursing and other administrative leaders Strong interprofessional collaboration within the medical center across the continuum Mature EMR makes it easier to implement alerts, documentation templates and centralized location for any proposed changes Successful ACP practice in nephrology gives the local leadership some successful practices from which to draw Passionate and experienced staff who are not only clinically competent but also familiar with the workflows involving the EMR process means that the change will not be such a significant impact to operations 	Volume of patients seen in the clinic in relation to staff may limit bandwidth and capacity to just performing required procedure Recent changes to department leadership can slow down the project as the new leaders are still learning their new roles Competing operational priorities such as the increase in demand for in-person services may lessen the resources provided to the project
OPPORTUNITIES	THREATS
The organization is one of several service areas in the region; a few of the service areas have successful practices that can be shared and leveraged Regional project support and oversight means that the local administration can utilize tools such as training materials, metrics and reports for this project The Oncology Care Model (OCM) value-based payment model can provide the organization with incentives for successful implementation of ACP	Several competitors have established ACP practices and are meeting the elements of the OCM; patients may choose to seek care from one of these areas There are other regulations involved with OCM that would need to be addressed beyond ACP implementation

Appendix E

Project Schedule

	NUR7801							NU	JR780	2						NU	R7803							
Activity	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15
Meet with preceptor	Х																							
Prepare project proposal		Х	Х	Х	Х	Х	х	Х																
Review existing information and baseline data for the project						x		x																
Present project proposal to key stakeholders									Х															
Get leadership approval									Х															
Get IRB approval										Х														
Identify team members from various										х														

	NUR7801							NU	JR780	2						NU	R7803	3						
Activity	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15
stakeholder groups																								
Bring team together										х														
Develop project aim										х														
and charter																								
Imbed process into											X													
EMR																								
Educate staff on EBP											х													
project including how																								
to acknowledge EMR																								
alert and use																								
documentation																								
template																								
Start implementing the												X												
EBP project																								
Provide real-time													X	х	X									
feedback as necessary																								
Meet to discuss													x	х	х									
potential barriers and																								
celebrate short-term																								

	NUR7801							NU	JR780	02						NU	R7803							
Activity	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15
wins																								
Review preliminary													X	х	Х									
findings																								
Complete data																х								
collection																								
Data analysis																х								
Present initial results																	Х							
to stakeholder and																								
team																								
Handoff project																	Х							
Evaluate outcomes																	Х							
Develop presentation																		X	X					
for dissemination of																								
information																								
Disseminate findings																				Х				
to local leadership and																								
stakeholders																								
Disseminate findings																					x	X		
with regional leaders																								

	NUR7801							NU	JR780)2						NU	R7803	;						
Activity	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15	Week 1	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15
and various peer groups																								
Disseminate findings to practice community																							Х	

Table 1

Potential Impact to Financial and Other Resources

Resources	Associated cost	Anticipated Duration	Dollar
		(over 15 weeks)	Amount
Human Resources			
Project management	Salary/benefits*	120 hours	6,600
Informatician	Salary/benefits*	16 hours	880
Education consultant	Salary/benefits*	8 hours	440
RN staff	Salary/benefits*	75 hours	4,125
Quality Coordinator	Salary/benefits*	16 hours	880
Statistician	Salary/benefits*	4 hours	220
Other resources			
EMR	Existing resource		0
Education materials	Customize existing		0
SPSS tool	Existing with school		0
Total Expenses			13,145

Note. Anticipated financial cost associated with EBP project implementation in 15 weeks

*Salary/benefits calculated at \$55 per hour

Table 2

Project Outcomes

Time	Pre-implementation	Post-implementation	Change
Number of patients with	905	882	23 ↓
advance directives			
Total number of patients	3,971	4,122	151 ↑
Percentage of patients	22.7%	21.3%	1.4%↓
with advance directives			

Table 3

One-Sample Test

					95% Confidence Interval of the					
					Diffe	prence				
	t	df	Sig. (2-tailed)	Mean	Lower	Upper				
				Difference						
Percent Change	31.571	1	.020	22.10000	13.2057	30.9943				

Note: Using unpaired *t*-test at the *p* value of ≤ 0.05 , the difference between the pre- and post-implementation data is not statistically significant.

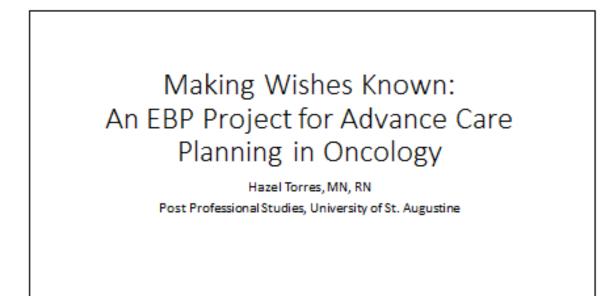
Table 4

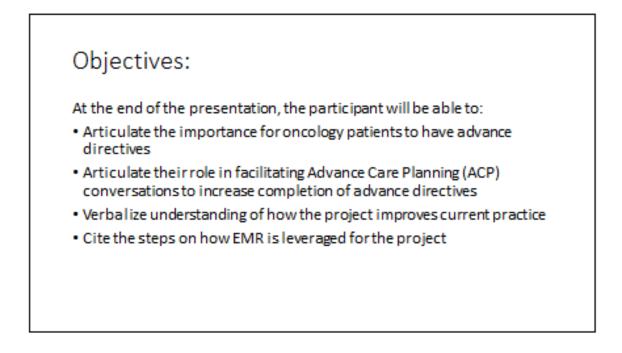
Measures for Evaluation

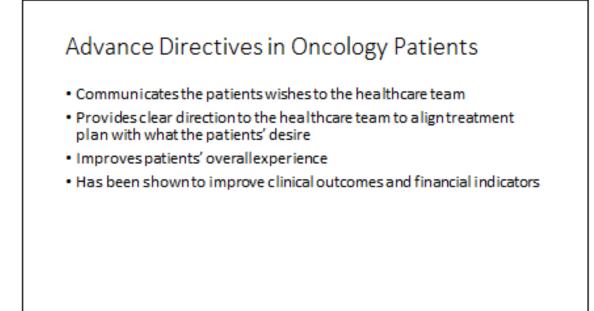
Measures	Category	Goal	Collection	Type of	Statistical
			timeframe	data	analyses
Documentation using template ^a	Process Measure	40	Monthly	Ratio	
Overtime ^b	Balancing	Zero	Bi-weekly	Ratio	
	Measure	hours			
Overtime Pay ^c	Financial	Zero	Bi-weekly	Ratio	
	Measure	dollars			
Documentation	Sustainability	>40	Monthly after	Ratio	
using template d	Measure		project		
			implementation		
Documentation of	Outcome	>15%	Every 4 weeks	Ratio	Unpaired <i>t</i> -
advance	Measure				test
directives ^e					

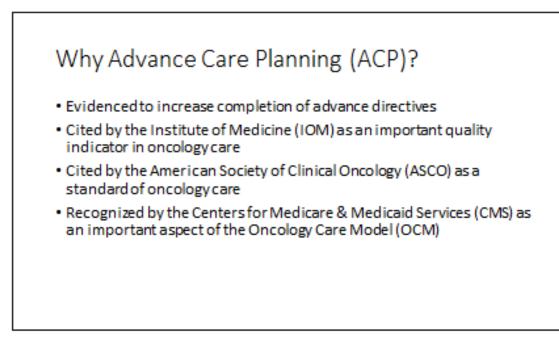
^a Measures the number of times the nurses use the EMR template for documenting the ACP interaction with the patients. ^b Measures how much time the nurses work over their regular hours during the implementation. ^c Measures how much in overtime pay is provided to the nurses in relation to the project. ^d Measures how often the nurses continue to use the ACP documentation template after the initial project implementation. ^g Measures the percentage of patients who have documentation of advance directives in their EMR Appendix F

Outline of Education for Staff







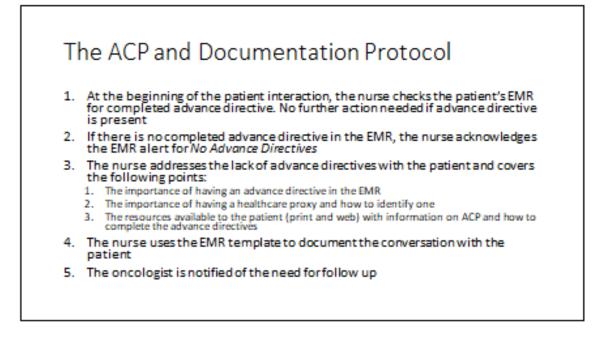


How Are We Doing?

- Insert baseline information on the percentage of oncology patients with completed advance directives
- Insert information on the average number of appointments get seen in the department

The Nurses' Role

- Nurse-led interventions increase patients' comfort in having ACP conversations
- Nurses in the department have several opportunities to incorporate ACP during their interactions or clinic visits
- Validates the nurses' role in being advocates for the patients under their care



Next steps

- Process measures and outcome measures
- Projecttimeline
- Weekly huddles and check-in
- Questions?