

QUALITY IMPROVEMENT

Palliative Integration Into Ambulatory Oncology: An Advance Care Planning Quality Improvement Project

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Authors' disclosures of conflicts of interest are found at the end of this article.

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<https://doi.org/10.6004/jadpro.2021.12.4.3>

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Abstract

Advance care planning (ACP) is essential to ensuring that patient-centered end-of-life goals are respected if a health crisis occurs. Advanced practitioner barriers to ACP include insufficient time and limited confidence in discussions. The purpose of this quality improvement project was to increase advanced cancer patients' electronic health record (EHR) documented surrogate decision maker and ACP documentation by 25% over 8 weeks. A secondary aim was to decrease patients' decisional conflict scores (DCS) related to life-sustaining treatment preferences after a clinical nurse specialist (CNS)-led ACP session. Using the define, measure, analyze, improve, and control (DMAIC) process of quality improvement methodology, an interprofessional team led by a palliative CNS fostered practice change by (a) incorporating a patient self-administered Supportive Care and Communication Questionnaire (SCCQ) to standardize the ACP assessment, (b) creating an EHR nursing and provider documentation template, (c) offering advanced cancer patients a palliative CNS consultation for ACP review and advance directive completion, and (d) evaluating patients' DCS through the four-item SURE tool. Of 126 participants provided with the SCCQ, 90 completed the document, resulting in a 71% return rate. Among the completed SCCQs, 37% (n = 33) requested a CNS consultation, with 76% (n = 25) returning for the ACP session. The CNS intervention yielded an average reduction of 1.4 points in SURE tool findings, a statistically significant decrease determined by a paired sample t-test. The project's interprofessional collaboration promoted a system-wide standardized ACP process throughout ambulatory, acute, and post-hospital settings.

A diagnosis of incurable cancer can result in a loss of control and heightened awareness of mortality, necessitating reflection on life's priorities (García-Rueda et al., 2016). Advance care planning (ACP) discussions represent a patient-centered experience proven to facilitate a review of end-of-life (EOL) preferences and quality of life goals (Gilligan et al., 2017). Through the purposeful exploration of what matters most to the patient and who would be the preferred health spokesperson if one becomes incapacitated, ACP allows a measure of control in a time of uncertainty. Advance care planning-associated outcomes include improved satisfaction in care, increased concordance of EOL wishes with care received, decreased use of life-sustaining treatments (LST), and the greater likelihood of death in the patient's preferred location (Myers et al., 2018; Oczkowski et al., 2016).

Advance care planning facilitators may use communication tools and conversations to elicit a patient's EOL wishes and formulate legal advance directives (AD), such as having medical power of attorney (MPOA) or living will (LW) documents (Brinkman-Stoppelenburg et al., 2014; Myers et al., 2018). An adjunct to AD for patients with serious illness is the provider orders for life-sustaining treatment (POLST), a medical order accepted across health settings. The POLST format varies among states, but routinely assesses the patient's or surrogate's LST preferences for cardiopulmonary resuscitation (CPR), mechanical ventilation, and artificial nutrition (Pedraza et al., 2017). Each state's regulations outline the clinical providers, including advanced practitioners (APs), who are legally allowed to complete the POLST, positioning the AP as an advocate for ensuring patients' wishes regarding LST are reflected (Hickman & Critser, 2018; Pedraza et al., 2017).

The American Society of Clinical Oncology (ASCO) indicates EOL care, shared decision-making, and ACP are primary palliative skills necessary among members of the oncology team (Bickel et al., 2016). The Institute of Medicine (2014) urges providers to proactively offer ACP conversations and revisit preferences throughout a patient's illness trajectory. Upon document completion, the health-care system must implement measures to assure AD document accessibil-

ity across health-care settings, such as through the electronic health record (EHR) sharing between inpatient acute care and outpatient locations, or via state-approved POLSTs (Institute of Medicine, 2014). The National Comprehensive Cancer Network (NCCN) palliative care guidelines encourage an assessment of surrogate decision makers, ACP documents, and patient values weeks to years before anticipated death of patients with incurable cancer (NCCN, 2018). Despite recognition of ACP as a quality metric, cited deterrents to ACP include insufficient time, perceived poor proficiency in discussions, and lack of comfort in document completion (Lund et al., 2015; Myers et al., 2018). During this project's needs assessment, oncology providers indicated the predominant constraint for ACP reflection was lack of time, further supporting the literature findings.

BACKGROUND

The quality improvement (QI) project sought to integrate ACP into routine oncology practice, with a targeted patient population with advanced cancers and a high potential for decompensation or death within a year. The project implementation occurred in an American College of Surgeons (ACS) Commission on Cancer (CoC)-accredited hospital-based ambulatory cancer center. Commission on Cancer guidelines include palliative care as an integral part of oncology care and mandate palliative services be available to patients through referral or onsite multidisciplinary approach (American College of Surgeons, 2016). Before project implementation, this standard prompted the incorporation of a palliative clinical nurse specialist (CNS)-led clinic embedded in the ambulatory setting and offered in conjunction with the existing interprofessional team.

A retrospective EHR review of 93 patients with advanced cancer demonstrated project need. Data from patients meeting inclusion criteria were obtained from the organization's most recent annual data available from the Montana Central Tumor Registry. The review found 17% had accessible ADs in the EHR and 11% contained a POLST. When ACP documents were available, they were inaccessible to other health-care teams outside the ambulatory oncology setting due to differing EHRs and missing techni-

cal processes necessary to bridge the gaps and ensure document continuity in all medical records. Establishing ACP discussions earlier in advanced cancer patients' treatment has been shown to enhance prognostic awareness while decreasing associated uncertainty related to incurable cancer, yet these were inconsistently documented in the sample (Zhang, 2017). The lack of ACP documentation placed patients at a safety risk (Figure 1) for potentially receiving undesirable forms of care (Institute of Medicine, 2001; Lund et al., 2015).

OBJECTIVES AND AIMS

The purpose of this QI project was to ascertain if, in adult clinic patients with advanced cancer, the use of a patient self-administered Supportive Care and Communication Questionnaire (SCCQ; Figure 2) implemented by oncology nurses, a standardized ACP documentation template in the EHR, and an optional palliative CNS consultation, when compared with prior oncology care, increased the percentage of documented surrogate decision makers and ACPs within the 8-week implementation phase.

The project aimed to increase advanced cancer patients' EHR documented surrogate decision maker and ACP documentation by 25%. Objectives to achieve this goal included the use of a SCCQ in 75% of advanced cancer patients, as this operationalized assessment of ACP, surrogate decision makers, and prior ADs. The second objective was to document surrogate decision makers and EOL preferences in 50% of the sample. Third, the SCCQ screened for decisional conflict related to patients' LST preferences by including the SURE tool (Fink et al., 2019; Lund et al., 2015).

Prior ACP is associated with lower decisional conflict scores (DCS) when measured by the SURE tool (Figure 3), which evaluated the patient's feelings of (a) uncertainty, (b) being informed, (c) clarity about values, and (d) support in decision-making (Chiarchiaro et al., 2015). The last objective targeted a reduction of SURE tool scores by one point on average for patients who participated in the voluntary CNS-led ACP session. Due to inherent uncertainty experienced during cancer treatment and discussion of LST preferences, the SURE tool promoted patients' realization of the need for participation in ACP and assessed specialty palliative consultation impact on uncertainty after consultation (Song & Sereika, 2006).

METHODOLOGY

Project Design

The project design utilized the define, measure, analyze, improve, and control (DMAIC) methodology of Lean QI. The project's theoretical framework was derived from Mishel's (2014) reconceptualized uncertainty in illness theory (RUIT), which explores the uncertainty that occurs when a person is unable to find meaning in illness or incorporate this into a new cognitive schema. Advanced practitioners and oncology nurses are positioned with education and credible authority to offer adaptive coping strategies to minimize uncertainty (Mishel, 2014, p. 73).

Setting

The project setting is the medical oncology department of a CoC-accredited ambulatory oncology center in north central Montana. Through the leadership of three medical oncologists, a

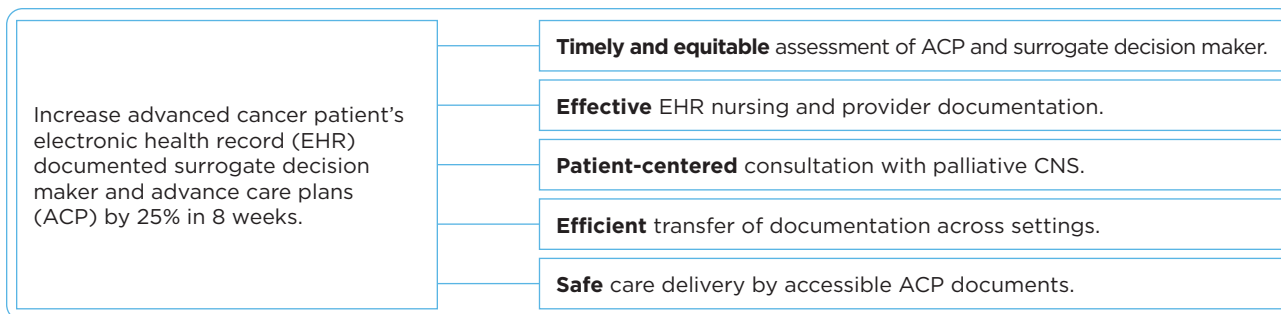


Figure 1. Palliative integration driver diagram categorized needs assessment according to the IOM (2001) aims and identified drivers needed to achieve measurable project outcome aims.

Supportive Care and Communication Questionnaire

Initials: _____ DOB: ___/___/_____
 Date: ___/___/_____

Advance Directive(s) Don't forget, provide a copy at your next visit.	Check <u>ALL</u> previously completed: <input type="checkbox"/> Living Will <input type="checkbox"/> Medical Power of Attorney <input type="checkbox"/> POLST (Provider Orders for Life Sustaining Treatment)	If yes, copy located: <input type="checkbox"/> Doctors' Office <input type="checkbox"/> Lawyer <input type="checkbox"/> Cancer Center <input type="checkbox"/> Hospital <input type="checkbox"/> Other: May we request a copy? <input type="checkbox"/> Yes <input type="checkbox"/> No
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If unable to speak for yourself, who would you want to be your decision maker?

Preferred Decision Maker: <input type="checkbox"/> Medical Power of Attorney <input type="checkbox"/> Spouse <input type="checkbox"/> Child/Children <input type="checkbox"/> Parent(s) <input type="checkbox"/> Sibling(s) <input type="checkbox"/> Friend <input type="checkbox"/> Other	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">Name</th> <th style="width: 50%; text-align: center;">Contact #</th> </tr> </thead> <tbody> <tr> <td style="height: 40px;"> </td> <td> </td> </tr> </tbody> </table>	Name	Contact #		
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Figure 2. Supportive Care and Communication Questionnaire (SCCQ).

nurse practitioner, and a physician assistant, an average of 630 new cancer patients are seen annually, with approximately one quarter of these patients presenting at an advanced stage of cancer at diagnosis.

Participants

Participants were chosen from a convenience sample identified by a medical oncology nurse based on the ASCO advanced cancer definition of distant metastases, life-limiting illness, or prognosis of 2 years or less life expectancy (Ferrell et al., 2017). Further inclusion criteria included (a) age 18 years or older, (b) English speaking and literate, (c) medical oncology patients seen at least once in the ambulatory setting, and (d) willingness to participate as signified by SCCQ return (Bickel et al., 2016; NCCN, 2018). Patients excluded were those who (a) refused, (b) demonstrated emotional distress or uncontrolled symptoms preventing SCCQ completion or CNS consultation, (c) received care outside the ambulatory oncology center or only received radiation therapy, and (d) were actively hospitalized or only assessed by medical oncology during a hospitalization.

Ethical Approval

In addition to receiving institutional support, this project met the University of South Alabama Institutional Review Board (IRB) criteria for a declaration of exemption from further IRB review, as it did not meet the current descriptions for human subject research.

Methods

The palliative CNS formulated the interprofessional team and incorporated input into the development of the ACP assessment process and EHR documentation templates. Collaboration with key staff included the medical records personnel responsible for ACP document flow to other EHRs and the patient service representatives in control of updating patients' preferred decision makers. Before project initiation, a 30-minute didactic session with a resource manual was provided to involved staff. Throughout the 8-week project, implementation was structured into four thematic phases (Figure 4) of preparation, initiation, exploration, and documentation (Fahner et al., 2019).

During the preparation phase, oncology staff identified advanced cancer patients who met the

Medical Choices

Medical choices should include your values and wishes. Advance care planning allows time to talk about what kind of care you would prefer if you became sicker. It is meant to guide your preferred decision maker and healthcare team if this were to happen. Please answer the below question, which is part of advance care planning.

If I became sicker and could not speak for myself:

- I **am sure** my choices for life-sustaining treatments like cardiopulmonary resuscitation (CPR), ventilators (breathing machines) or artificial feeding tubes are known to my decision maker
- I **am not sure** my choices about such life-sustaining treatments are known

Are you **SURE** about your choices?

Yes No

Sure of myself	Do you feel SURE you know the best choice for you?		
Understand information	Do you know the benefits and risks of each option?		
Risk-benefit ratio	Are you clear about which benefits and risks matter most to you?		
Encouragement	Do you have enough support and advice to make a choice?		

If you answered NO to any SURE question above, request a Palliative Clinical Nurse Specialist (CNS) referral

- Yes I would like a referral No I am not interested

Figure 3. SURE tool.

inclusion criteria and prepared a patient SCCQ. Initiation followed on the patient's scheduled oncology visit when nurses provided the SCCQ and a project description. Patients chose to complete and return the SCCQ, with or without a desired palliative CNS consultation, or declined participation. Exploration occurred as the oncology nurses reviewed the SCCQ, and when additional ACP information was desired, offered participants the Five Wishes document. Five Wishes combines the medical power of attorney and living will components with review of patients' wishes for comfort, dignity, and EOL care (Aging With Dignity, 2011). Patients requesting a CNS referral for ACP were scheduled on a later date. When preferred decision makers differed from the SCCQ to EHR, the patient service representatives were informed by the nurse. Documentation occurred through the nurses' use of a standardized EHR template patterned from the SCCQ and an alert located in the header of the patient's record. For those who participated in the palliative CNS consultation, a templated provider document and ADs completed were incorporated into the EHR. Finalized ADs were given to the patient and centralized medical record department. After completion of the CNS consultation, patients repeated the four-item SURE tool evaluating DCS related to LST preferences.

Privacy, Data Storage, and Confidentiality

Patients' initial SCCQ and repeat SURE tool documents from CNS consultation were de-identified and maintained in a locked file in a password-protected electronic database on a network computer.

Data Analysis

The categorical variables were summarized by count and percentage. Descriptive statistics paired sample t-test evaluated baseline and post-CNS consultation SURE tool scores, with alpha significance set at 0.05. Analysis was performed using IBM Statistical Package for the Social Sciences (SPSS) for Windows, version 26.

RESULTS

Participant Demographics

A total of 142 patients met inclusion criteria and 16 were omitted based on exclusion criteria, resulting in a sample size of 126. Of these, 29% (n = 36) declined participation, yielding a completion rate of 71% (n = 90). Among this group, 37% (n = 33) requested a palliative CNS-led ACP session and 76% (n = 25) returned to complete this consultation. Table 1 compares the demographics for those who completed SCCQ and the ACP consultation. The predominant race for both groups was Caucasian, with a similar mean age of 68.5 and 66.4, respec-

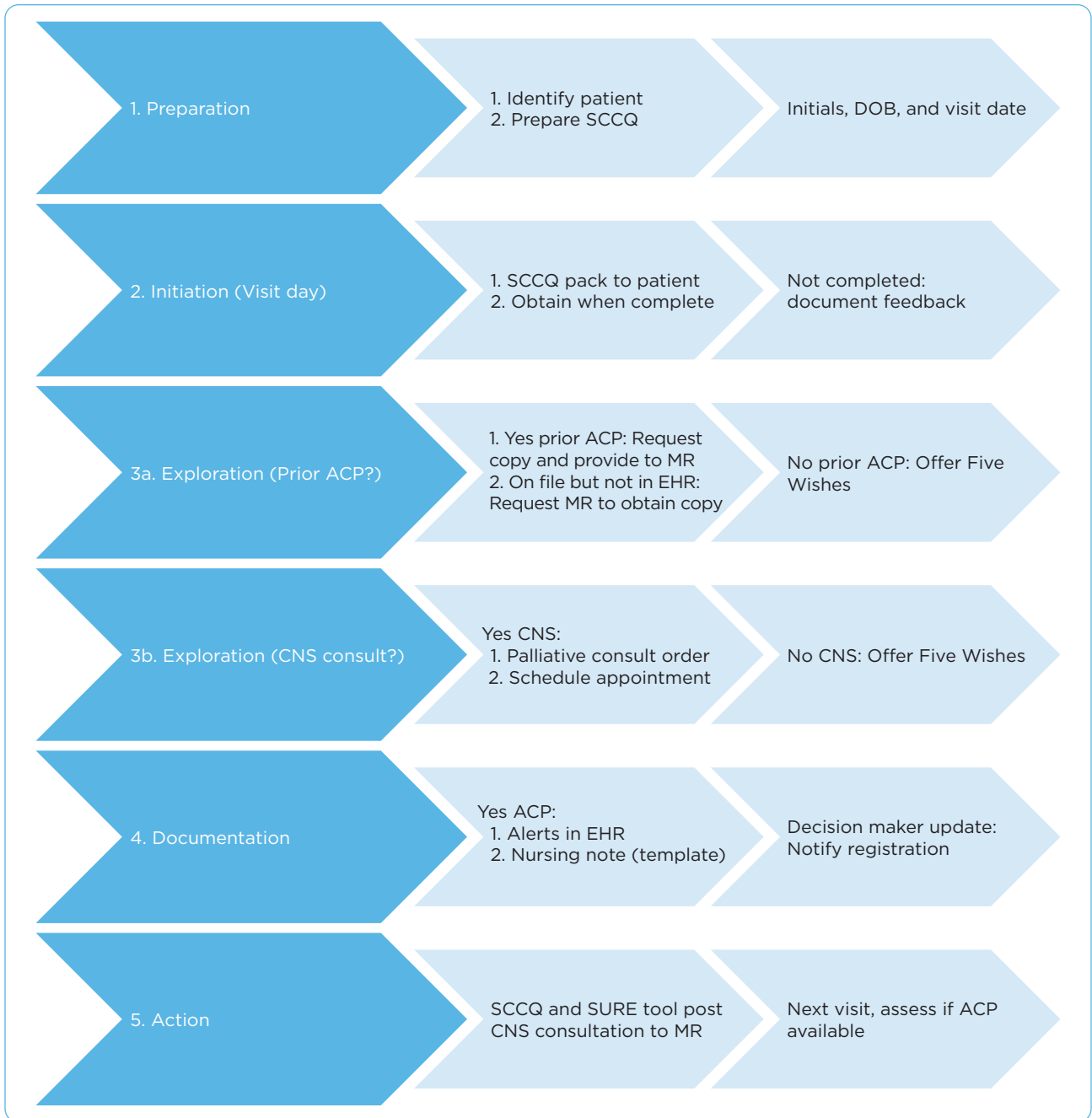


Figure 4. Supportive Care and Communication Questionnaire (SCCQ) implementation phases. ACP = advance care planning; EHR = electronic health record; CNS = clinical nurse specialist; MR = medical record.

tively, and malignancies of the lung dominating the type of advanced cancer in each group.

Outcome Measures

The aim of a 25% increase in documented surrogate decision makers and ACP from baseline evaluation was achieved in the SCCQ participants

through: (a) EHR record of ADs in 38% (n = 34) of the sample, with an additional 14 completed during CNS consultation, resulting in a total of 58% (n = 52) ADs, or a 41% increase, (b) POLST forms to reflect LST preferences across health-care settings found in 40% (n = 36) of EHRs, reflecting a 29% increase, and (c) documented preferred deci-

Table 1. Participant Demographics

	Completed SCCQ (n = 90), no. (%)	ACP session participants (n = 25), no. (%)
Sex		
Male	48 (53.3)	10 (40)
Female	42 (46.7)	15 (60)
Race		
Caucasian	82 (91.1)	20 (80)
Native American	4 (4.4)	2 (8)
Asian	2 (2.2)	1 (4)
African American	1 (1.1)	1 (4)
Hispanic	1 (1.1)	1 (4)
Age	68.5 years	66.4 years
Cancer type		
Lung	10 (11)	7 (28)

sion makers available in 88% (n = 79) of records, indicating a 45% increase. The SCCQ reached 89% (n = 126) of the advanced cancer population, exceeding the objective of 75% implementation. SCCQ and documentation template use resulted in EHR confirmation of a surrogate decision maker in 88% (n = 79) and EOL preferences in 68% (n = 61), surpassing the objective of 50% documentation of these factors. Although 36 potential participants met inclusion criteria but did not complete the SCCQ, an EHR chart review found a mere 8% (n = 3) of ADs and 11% (n = 4) of POLST were present in this group.

The SURE tool embedded in the SCCQ (Figure 3) posed the scenario that, if the patient's condition worsened and was unable to speak for themselves, "I am sure my choices for life-sustaining treatments like CPR, ventilators (breathing machines), or artificial feeding tubes are known to my decision maker?" A total SURE score of less than four indicated the patient was experiencing decisional conflict (Ferron Parayre et al., 2014). Out of 25 participants in the CNS-led ACP consultation, baseline SURE scores were 57 of 100 and afterward 21 of 100, indicating a total of 36 points, or average 1.44, decrease in DCS post-CNS consultation. A paired-sample t-test compared the initial scores to the post-CNS consultation SURE tool scores. The mean on the initial was 1.7 (standard deviation = 1.72), and the mean on the repeat score was 3.10 (standard deviation = 1.51). A statistically

significant decrease in SURE tool scores from pre-CNS to post-CNS ACP consults was found ($t(19) = -3.829, p < .05$).

Limitations

The project outcomes are generalizable to ambulatory oncology clinics of similar patient size. Limitations include a predominately older, Caucasian population sampled in a brief timeframe of 8 weeks.

DISCUSSION

This QI project demonstrated an increased percentage of defined surrogate decision makers and ACP documents through (a) standardized assessment process and EHR documentation templates, (b) educational resources combined with CNS mentoring, (c) dedicated palliative CNS patient consultation time, and (d) structured discussion format through the use of the Five Wishes document and POLST (Bagcivan et al., 2018; Lund et al., 2015). Inclusion of the SURE tool promoted the patient's realization of the need for participation in ACP and assessed specialty palliative consultation effectiveness by demonstrating a statistically significant decrease of uncertainty after CNS consultation. The decrease in SURE tool scores was consistent with literature findings that ACP discussions improved certainty regarding EOL decisions (Lund et al., 2015; Myers et al., 2018). By targeting the advanced can-

cer population, who have an estimated lifespan of less than 2 years, patient-centered preferences were obtained before a decline in health prevented exploration of values or determination of preferred medical decision makers. Process change ensured continuity of advance directives across the existing EHR silos and supported awareness of patient values to other providers.

The positive patient response shown through the volume of patients requesting a CNS session for ACP review, coupled with a 76% (n = 25) participation rate, demonstrated the value patients placed on this consultation. Qualitative feedback, solicited in verbal comments and an open comment section on the repeat SURE tool, resulted in patients' and surrogate decision makers' appreciation for the additional personalized time, opportunity to review a difficult topic, and relief in guidance through the AD completion process. In over half the sessions, patients involved their surrogate, allowing this individual to further clarify and comprehend the patient's EOL preferences. A survey of the medical oncologists resulted in unanimous support of the dedicated palliative CNS time to ACP and recognized the value of the discussion, as before project implementation, they were unable to consistently provide ACP review because conversations exceeded allotted office visit time.

Due to the significant improvement in ACP documentation and EHR transparency, project interventions were incorporated into a system-wide ACP QI project impacting a 500-bed system, including acute and post-acute long-term care services of three skilled nursing facilities and a rehabilitation unit, as well as three adult ambulatory clinics. Project-influenced interventions included the (a) development of an ACP patient informational handout, (b) implementation of a system-wide nurse and provider education module (Figure 5), (c) design of an efficient process for AD entry into the patient's EHR, and (d) incorporation of SCCQ questions into the acute-care admission process. The provider template for ACP documentation was made available to oncology providers and other providers throughout the health system. The ACP patient informational handout was added to the organization's website to enhance public awareness (Benefis Health, 2019).

IMPLICATIONS FOR THE ADVANCED PRACTITIONER

Advance care planning can influence the advanced cancer patient's quality of life and death (Fahner et al., 2019). A proactive ACP intervention led by an AP not only lessens patient and family decisional conflict but also promotes a trusting shared decision-making opportunity where the uniqueness of the patient's cancer journey can be heard (Lin et al., 2019). The partnership developed between the AP and oncology patient is the foundation for quality ACP review. Both oncology nurses and APs are crucial to providing ACP resources, facilitating ongoing conversations, and promoting AD completion to enhance patient-centered care.

Multifaceted ACP interventions require a shift from a one-time discussion to dynamic communication over time (Ferrell et al., 2017; Myers et al., 2018). Advanced practitioners are equipped to garner organizational support, implement process standardization, and lead interprofessional teams to improve ACP in the oncology population (Rietze et al., 2016). The project approach demonstrated value in assessing the patient's readiness to participate in ACP through use of the SURE tool and increased AP efficiency by scheduling ACP clinic slots to promote adequate time allotment. The project reinforced that ACP is not just an option but an essential component of primary palliative care for oncology patients (Bestvina & Polite, 2017).

CONCLUSIONS

The ACP QI project improved Institute of Medicine quality aims by achieving (a) timely and equitable assessment of ADs and surrogate decision makers through use of the SCCQ in 89% of the sample, (b) effective documentation by the provided EHR template that clearly documented 88% of preferred surrogate decision makers and 68% of LST preferences, (c) patient-centered consultation with a palliative CNS accepted by 37% of those who completed the SCCQ, resulting in over 50% of the subset completing AD and POLST documents, (d) efficient use of patient, nurse, and CNS time by scheduling ACP sessions at a later date, and (e) safe care by changing the process for AD and POLST storage in EHRs accessible by providers throughout the system. The multifaceted approach offered by the QI proj-

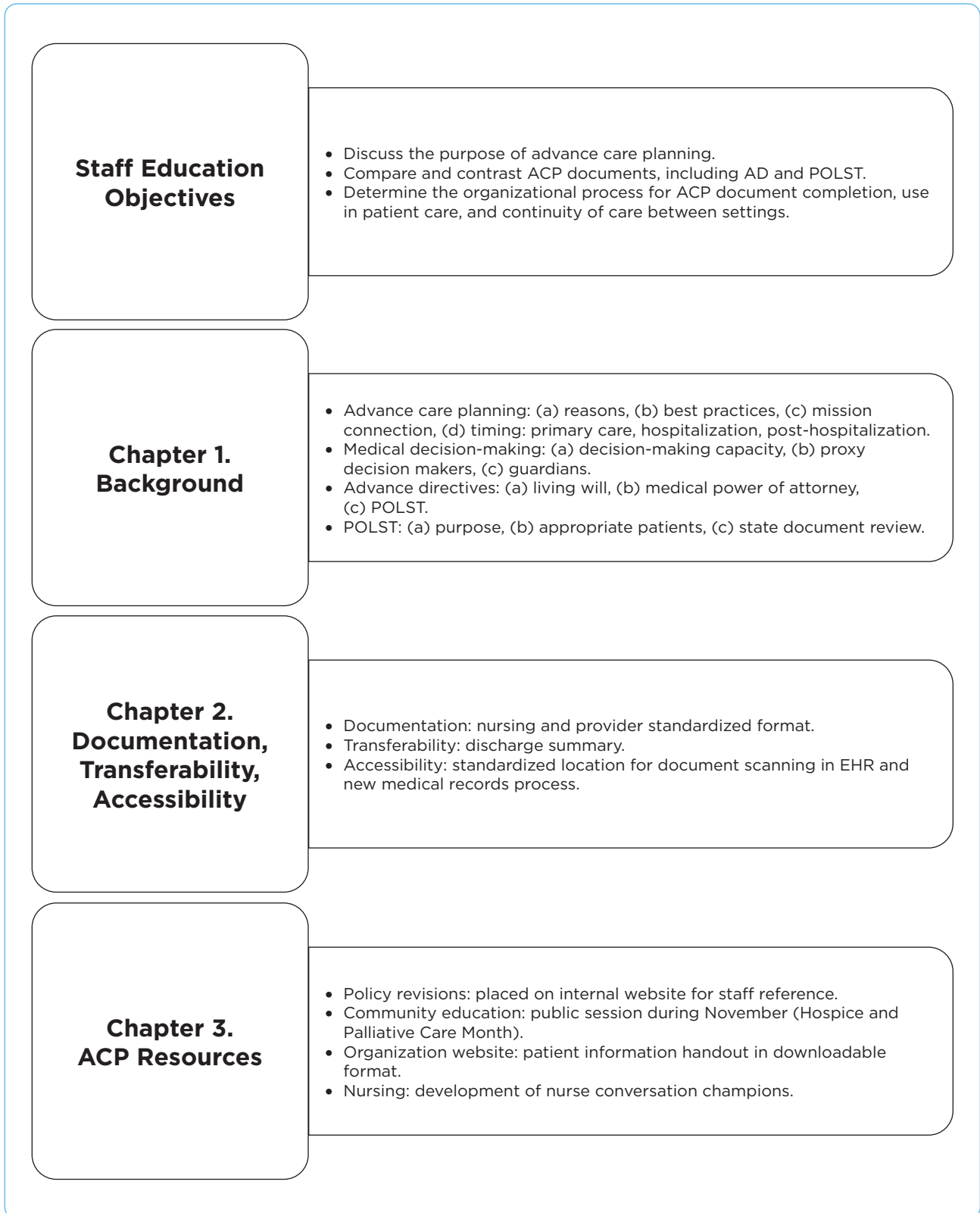


Figure 5. System-wide nurse and provider education module. ACP = advance care planning; AD = advance directive; POLST = physician orders for life-sustaining treatment; EHR = electronic health record.

ect, including an interprofessional team working collaboratively with the palliative CNS, allowed the goal of a 25% increase in EHR documented surrogate decision makers and ACPs to be surpassed. SURE tool use before and after palliative CNS consultation demonstrated a statistically significant decrease in DCS regarding LST and surrogate decision makers' knowledge of these important EOL values, further supporting the benefit ACP offers to reduce uncertainty in the advanced cancer population. ●

Acknowledgment

The authors would like to thank The Benefis Sletten Cancer Institute and Whitney McKinley, DNP, FNP-BC, for their support.

Disclosure

The authors have no conflicts of interest to disclose.

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