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Evaluation of Quality Improvement Initiatives to Improve and Sustain Advance Care Planning Completion and Documentation

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Introduction

Advance care planning (ACP) is a "process that supports adults in understanding and sharing their personal values, life goals, and preferences regarding future medical care."[1] It is particularly important because many patients at the end of life lose the ability to speak for themselves.[2] By exploring a patient's preferences for end-of-life care prior to loss of decision making capacity, ACP helps to promote medical treatment that is congruent with the patient's values and preferences.[3] Successful ACP is associated with improved patient quality of life and satisfaction with care, and decreased levels of stress, anxiety, and depression among bereaved family members.[4–6] Patients recognize the importance of ACP and often want to complete advance directives (ADs), however, only approximately one-third of US adults have done so.[7]

Despite the benefits of ACP, achieving and sustaining high ACP completion rates remain challenging.[8] How to improve ACP completion rates is the aim of quality improvement initiatives (QI), including a focus on how healthcare team workflows can be supported by electronic health record (EHR)-based tools.[9,10] ACP initiatives span multiple venues,

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including inpatient, outpatient, and perioperative settings, and can involve registered nurses (RNs), physicians, social workers, care coordinators and other healthcare team members.[11–14] Few studies have considered the sustainability of QI initiatives.

Evidence-based practice, derived from current research, can successfully improve patient outcomes, lead to quality palliative care, and is particularly suited to address ACP challenges through sustainable initiatives.[15,16] The success of using evidence in practice depends on a multitude of factors, including the initiative's dissemination methods, "buy in," and clinician implementation. Researchers recognize that education alone is unlikely to result in a change in clinician behavior.[17] Interventions that effectively change practice behavior include: system reminders or practice prompts; opinion leaders, change champions, and core groups; audit and feedback of performance measures; and multi-faceted interventions (education, train-the-trainer programs, case studies, interactive discussions, etc.).[18] The opinion leader or change champion from the local healthcare setting is viewed as a respected and trusted source of influence among the peer group, is an expert clinician who has a positive working relationship with other healthcare team members, is passionate and persistent about the practice change topic, and is committed to implementing evidence-based practice. The social system or culture, defined as a set of interrelated members engaged in joint problem solving to accomplish a common goal, can also have a significant influence on evidence-based practice adoption and includes senior leadership support, educating new staff, and updating policies and procedures.[19]

To implement evidence-based practice in palliative care, the Palliative Care Champions Committee (PCCC) was established at XXX in 2005 and is co-led by a palliative care advanced practice nurse and two bachelor's prepared charge nurses. The PCCC is composed of change champions from multiple care team disciplines, including bedside RNs from each inpatient unit, attending palliative care providers (physicians and advanced practice providers [advanced practice nurses and physician assistants]), case managers, social workers, spiritual care providers, psychologists, art and music therapists, and rehabilitation therapists. This committee serves as a venue for members to meet monthly, representing their individual clinical units for the purpose of exploring up-to-date education on the interdisciplinary process of palliative care, evaluating current palliative care research evidence and approaches, advocating for and identifying patients that may benefit from palliative care services, providing assessment tools to guide practice, developing culturally competent educational materials for patients and family caregivers, and collaborating on QI initiatives.

Enhancing the roles of non-physician healthcare team members in the ACP process is a targeted area for QI at XXX, where gains in ACP documentation rates have been made but not sustained. One of the PCCC's primary goals is to improve the ACP process, with a focus on identifying and documenting a medical durable power of attorney (MDPOA). The PCCC has led multiple QI initiatives over the past decade including educational in-services, one-on-one training, audit and feedback to individual inpatient units, and designing user-friendly ACP forms and an electronic health record (EHR)-based documentation section for ACP ("Healthcare Directive Screening Section") for healthcare team member use (Table 1).

Objective

Our objective is to assess the impact of PCCC-led QI initiatives on healthcare team member comfort in completing ACP and MDPOA, barriers to AD completion in daily practice, facilitators of or suggestions for assisting patients with AD completion, and perspectives on previous QI initiatives at XXX. This project surveyed RNs, case managers, care managers, social workers, and medical assistants in both inpatient and outpatient settings in 2013 and 2017. We focused on these healthcare team members instead of licensed independent providers to specifically understand the perspectives of non-physician healthcare team members who traditionally may not have been involved in the ACP process. We describe the results from these surveys and next steps for future QI initiatives to improve ACP processes using the interdisciplinary team.

Methods

Survey Development

Members of the PCCC developed the original 2013 survey. The 2017 survey was created by the authors who collectively have expertise in palliative care nursing, interprofessional care, QI initiatives, and primary care (internal medicine, geriatric medicine). The 2017 survey includes questions from the 2013 survey with an additional query about perspectives on experiences with XXX ACP QI initiatives. The final 2017 survey takes five minutes to complete and is comprised of six questions including the healthcare team member's role and practice care setting. The survey (Figure 1) focuses on the following domains: barriers to ACP upon patient admission or clinic visit, facilitators of ACP, comfort level with helping patients complete an MDPOA form, and perspectives on ACP QI initiatives. The XXX Multiple Institutional Review Board determined this initiative was not human subjects' research; thus, informed consent was not required. Participation was voluntary and no identifiable information was collected.

The survey referred to the "Healthcare Directive Screening" section in the EHR. The Healthcare Directive Screening section was implemented prior to 2013. This area strives to serve as a "single source of truth" related to an individual's ACP information. Healthcare team members have access to this section and can document patient preferences for a healthcare decision maker, an alternate healthcare decision maker, types of ACP documents that a patient may have (i.e., Living Will, MOST/POLST form, cardiopulmonary resuscitation [CPR] directive, etc.). The content and screening process has not changed significantly between 2013 and 2017, and does not use a decision tree. Patients could enter inpatient encounters through the Emergency Department, after procedures, as direct admits, or transfers from clinics or other facilities.

Setting and Participants

XXX is a 673-bed Magnet® designated, tertiary academic medical center located in XXX, and has attained Joint Commission Advanced Palliative Care Certification. Inpatient and outpatient RNs, case managers, care managers, social workers, and medical assistants were electronically surveyed by email link in August, 2017. Email reminders were sent to all staff

once during the four-week survey period. Data were collected four years previously (July, 2013) through a similar electronic survey methodology, though the earlier survey included inpatient and outpatient RNs only.

Data Analysis

Survey data were analyzed using descriptive statistics and tests of difference and association. Data analyses were conducted in SAS Version 9.4, and statistical significance was set at a p-value of 0.05. Due to the small numbers of case manager, care manager, and social worker respondents, these groups were combined into one category labeled care coordinators.

Results

Healthcare team member characteristics for the 2013 and 2017 survey cohorts are summarized in Table 2. In 2013, 740 RNs completed the survey for a 53% response rate. Most RNs practiced within inpatient settings (72%), and both inpatient and outpatient RNs practiced predominately within critical care (24%) services. In 2017, 924 healthcare team members completed the survey for a 30% response rate. Most participants were RNs (n=732, 79%), with care coordinators (n=52), and medical assistants (n = 125) representing 6% and 14% of the sample, respectively. Similar to the 2013 survey participants, most respondents practiced within inpatient specialty areas (60%) and represented critical care services; however, medical assistants were predominantly employed in the outpatient clinic setting.

Identified barriers to completing ADs with patients are summarized in Table 3. The 2013 survey revealed that inpatient and outpatient RNs identified logistic-related issues (65%) as the predominant barrier to AD completion. Logistic issues included not knowing where AD forms are located on the unit or within the EHR and/or how to scan the AD into the EHR. Caring for non-verbal patients or those with altered mental status (35%) and not having enough time to ask or complete the AD (45%) were also identified as prevalent barriers. In contrast, 2017 survey results show that both inpatient and outpatient healthcare team members identified not having enough time to complete the AD (50%) as the most frequent barrier. Non-verbal patients or those with altered mental status (22%) and logistic-related issues (16%) were the second most prevalent barriers for inpatient and outpatient healthcare team members, respectively. Additionally, respondents cited multiple other reasons for not assisting with ACP. These include, “not part of my workflow,” “I don’t do this in my care area (Emergency Department, Ambulatory Care, Perioperative Services),” or “It is not appropriate to discuss in my work setting.”

Suggested improvements to AD completion differed from 2013 to 2017 and appeared to be based on current or previously completed AD QI initiatives within the healthcare setting (Table 4). Results from 2013 showed that the most commonly suggested improvements included pop-up reminders in the EHR (53%) and having AD algorithms or flow charts (50%). Both of these suggestions were implemented by the PCCC (Table 1). Respondents from the 2017 survey suggested that having dedicated staff (30%) would be most beneficial for improving AD completion and most outpatient healthcare team members desired education related to ACP (28%).

The 2017 survey had three additional notable findings. First, 55% of outpatient RNs and 47% of inpatient care coordinators reported rarely assisting with ACP compared with 19% of inpatients RNs ($p < 0.0001$). Second, 40% of inpatient RNs versus 20% of outpatient healthcare team members reported feeling more comfortable helping patients complete a MDPOA in comparison to one year ago ($p < 0.0001$). Third, 26% of inpatient healthcare team members and 12% of outpatient healthcare team members reported being involved in an ACP QI initiative in the past year.

Lessons Learned

This study summarizes the impact of ACP QI efforts led by an established PCCC in a large academic health system. Specifically, we outlined a multi-year process of implementing strategies to improve ACP and the recurrent use of a survey to strategically identify current barriers and facilitators to ACP. The PCCC has worked on multiple projects with the goal of increasing the current number of completed ADs from 27% to 39%, and specifically, the number of hospitalized patients with an MDPOA from 59% to 78%. Much of the PCCC's work has focused on inpatient staff, and has not yet been able to expand to outpatient settings. Baseline ACP documentation rates of healthcare decision makers were originally derived from time intensive chart reviews completed by individual RN champions. The champions were responsible for rigorous inpatient unit in-services and one-on-one competency training as strategies for implementing evidence-based practices. Using 2013 survey results, PCCC leadership focused on modifiable hospital-wide issues. For example, the PCCC initiated focused QI initiatives to simplify AD documentation processes, provided staff education regarding various AD types, and developed and implemented user-friendly forms and screens in the EHR to document patient's healthcare decision makers. As a result, some of the specific suggestions for improvement from the 2013 survey were not repeated in the 2017 survey. The 2017 survey also demonstrated the reach of the PCCC-led efforts, where one in four inpatient RNs reported experience with an ACP QI initiative in the past year.

The PCCC has focused on ACP QI initiatives for more than a decade. Measuring the global impact of the PCCC is challenging given that we are essentially attempting to measure culture change. As a whole, the survey findings suggest that positive changes are occurring, especially in the inpatient setting. For example, among the 2017 respondents, 40% of inpatient RNs reported feeling more comfortable assisting patients with MDPOA counseling compared to one year prior. This confidence is supported by hospital-wide changes. For example, there were improvements in audit and feedback methods for AD data by utilizing EHR-based reports, instead of individualized chart review, which enabled the audit results to be more available, accurate, and timely so that immediate feedback to healthcare teams can occur. Fortunately, these same EHR-based audit and feedback methods can also be used to support planned QI initiatives in outpatient clinics. Additionally, improved confidence in completing ACP may also be attributed to innovative educational strategies. Due to increased turnover in overall nursing staff and the prevalence of palliative care champions, ongoing education has been restructured and now includes computer-based, virtual classroom, and video review for new staff. Additionally, inpatient unit competitions and incentives for improved AD completion rates have bolstered support for PCCC initiatives.

The comfort level of inpatient RNs has likely been influenced by QI initiatives; expanded initiatives that include outpatient healthcare team members may be helpful so that they feel more ownership in ACP processes.

Survey respondents (28%) noted patient lack of decision making capacity to be a barrier to ACP. This result is unsurprising given the high prevalence of delirium among hospitalized patients, especially older adults. This finding emphasizes the opportunity to develop QI initiatives that focus on outpatient visits before a medical change. Additionally, there are opportunities to target care transitions to engage patients who have regained decision making capacity related to ACP.

Next Steps

The 2017 survey highlights that time and logistical issues (e.g., locating AD forms and AD documentation in the EHR) remain key barriers. The inclusion of outpatient healthcare team members in the 2017 survey revealed that 55% of outpatient RNs reported rarely assisting patients with ACP as part of their clinical role. Outpatient healthcare team members described a need for additional education, which is unsurprising since outpatient education about ACP for medical assistants has only recently started as part of ambulatory care practice transformation efforts. Building on inpatient progress for ACP, a critical next step is to engage outpatient palliative care/ACP champions in the PCCC to lead clinic-based QI initiatives to improve AD completion rates. Specifically, there are opportunities to strengthen staff workflows, increase education, and gather input from outpatient clinical champions to improve ACP in outpatient settings. Aligned with identifying clinical champions across all settings, the PCCC also sponsors annual National Healthcare Decisions Day events to raise awareness of ACP and provide patients and staff opportunities to complete an MDPOA.[20]

Dedicated staff to promote ACP in inpatient areas was identified as a top facilitator among both inpatient and outpatient healthcare team members. This desire may come from knowledge of existing models that use dedicated staff and acknowledgement of the multiple competing demands that all healthcare team members juggle. However, this option can be cost-prohibitive in resource-limited settings. The nonclinical layperson (volunteer or paid) is a potential alternative, as proposed by recent investigations. For example, evaluation of a peer-led ACP workshop demonstrated enhanced awareness of and engagement in ACP discussion among participants.[21] Lay patient navigators were successful in improving ACP among Latinos with advanced cancer.[22] Additionally, cancer patients who participated in ACP discussions with trained lay navigators had fewer hospitalizations within the last 30 days of life when compared with their counterparts who declined ACP participation.[23] While establishing a lay navigator training program requires upfront investment, adding lay navigators may ultimately be a cost-effective way to promote ACP discussions among patients, laypersons, and even the community at large.

With input and partnership from the PCCC and informed by the 2017 survey results, multiple new QI initiatives to improve ACP are in progress. For example, given the integration of AD documentation into the EHR for healthcare team members, a system-wide

initiative is underway to engage patients in completing their own AD and uploading it into XXX's patient portal, *My Health Connection*. It is also anticipated that healthcare team members will take part in the process. In addition, medical group visits to discuss ACP now occur regularly in the seniors, cancer center, and palliative care clinics. Plans to integrate medical group visits into the neurodegenerative clinic are forthcoming. Daily interdisciplinary rounds and coaching by the palliative care inpatient service to integrate primary palliative care within the cardiothoracic ICU has facilitated family meetings within three days post admission to assist in ACP and MDPOA documentation. There is momentum to integrate this model into other ICUs throughout the hospital. Also, during National Healthcare Decisions Day, the PCCC coordinates informational ACP teaching sessions and tables throughout the hospital; over 100 personal MDPOA forms were completed by staff and patients' family members in 2017.

Summary

The PCCC, composed primarily of RN champions, has led multiple QI initiatives focused on improving and sustaining ACP workflows and AD documentation for more than ten years. The use of two brief surveys has helped identify current barriers and suggestions for improvement from the perspective of multiple healthcare team members within inpatient and outpatient settings. The combination of interdisciplinary champions and feedback from front-line healthcare team members about daily practice continues to guide QI strategies for implementing, adapting, and sustaining evidence-based practices for improving ACP.

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1. Upon patient admission or clinic visit, what barriers do you face when completing the Advance Directive (AD)/Healthcare Directive Screening section?
   a. Patient non-verbal or altered mental status
   b. I don't have enough time to ask
   c. I don't have enough time to go through the section in detail
   d. I don't remember to ask
   e. The forms are too complicated
   f. The process is too complicated
   g. I don't fully understand the AD/Healthcare Directive choices available to patients
   h. I don't know where the AD/Healthcare Directive forms are located on the unit
   i. I feel uncomfortable asking
   j. I don't know where this section is located in EPIC
   k. I don't know how to have the AD/Healthcare directive forms scanned into EPIC
   l. I feel AD/Healthcare directive forms do not apply to certain patients
   m. None
   n. Other barriers, please specify _____

2. What would improve your ability to fully complete the AD/Healthcare Directive Screening section? (Please check all that apply)
   a. Dedicated staff to facilitate advance care planning
   b. Administrative commitment to advance care planning
   c. Physician commitment to advance care planning
   d. Employee campaign
   e. Insurance incentive
   f. Public health awareness campaign
   g. Improvement in EHR processes

3. Has an ACP quality improvement initiative taken place in your practice setting?
   a. Yes
   b. No
   c. Unsure

4. Compared to 1 year ago, I feel more comfortable helping my patient complete a medical durable power of attorney (MDPOA).
   a. Strongly agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly agree

FIGURE 1.
Survey

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Table 1.

Palliative Care Champions Committee Initiatives to Improve Advance Directive Completion

Timeline	Initiative
2006–2007	• Revise advance directive (AD) worksheet
2007–2009	• Ongoing in-service education of staff nurses about AD completion process
2010	• Biannual chart audit of all inpatient units on use of AD worksheet completion and AD scanning into the medical record
2011	• Streamline the AD worksheet into a user-friendly electronic document that is available to all staff through the electronic health record (EHR) • AD chart audits on all inpatient units
2012	• Develop an electronic AD education module with mandatory assignment to all RNs. Module objectives were to 1) accurately complete an AD section in the EHR, 2) recognize the Health Information Management process for scanning a patient's legal AD into the EHR, and 3) locate a patient's AD in the EHR • Health Information Management scanning initiative including specific bins/folders on each unit with daily collection of ADs • One-on-one RN staff education with palliative care champion, focusing on review of different AD documents and review of how to complete the AD section in the EHR • Continue chart audits on inpatient units
2013	• Quality improvement survey of RN staff about AD completion (July 2013) • Update AD documentation sections in the EHR • Generate automatic messages to inpatient RN staff if patient AD section incomplete • PCCC Graduate RN student chart audit of entire hospital • Prepare for and participate in the Joint Commission Advanced Certification for Palliative Care process
2014	• Develop education on EHR AD section • Develop algorithm and EHR reminders to assist nurses in identifying process for AD completion • Disseminate scripted phrases for AD conversations • Review and reeducate about state Healthcare Directive Statutes and various types of surrogate decision makers • Develop information sheet "Top 10 questions about AD that you are afraid to ask…" • Work with unit clerks to order materials and reorganize AD drawers • Palliative Medicine fellow conducts AD audits and shares results with champions on individual units
2015	• Conduct AD education focusing on RN "comfort of completion" • Update palliative care intranet site to include AD information and educational materials • Review of Health Information Management scanning initiative • Update computerized training module • Prepare for and participate in the Joint Commission Advanced Certification for Palliative Care process
2016	• Quarterly EHR-based, individualized inpatient unit audit and feedback reports on AD completion • Ongoing PCCC education of staff (in-services, posters) • Discuss with palliative care administration about having a dedicated team to have AD conversations with patients • Update Health Information Management scanning on each individual unit initiative: Direct scan to EHR on daily basis and auditing of scanned documents
2017	• Conduct "unit competitions" with incentives awarded to winning unit for most ADs completed • Individual unit AD completion projects • Videos, posters, staff meeting agendas, individual 1:1 education sessions • Monthly EHR-based reports on AD completion • Quality improvement survey of RN, care coordinator, social worker, and medical assistant staff (August 2017)

Timeline	Initiative
	• Prepare for and participate in the Joint Commission Advanced Certification for Palliative Care process

* AD section refers to the "Healthcare Directive Screening" section of the EHR.

Table 2.

Healthcare Team Member Characteristics

	2013 N=740		2017 N=924	
	Inpatient N=532	**Outpatient N=208**	**Inpatient N=553**	**Outpatient N=371**
Healthcare Team Member Role	N (%)		N (%)	
Nurse	532 (100)	208 (100)	516 (93)	216 (58)
Care Coordinator *	-	-	30 (5)	22 (6)
Medical Assistant	-	-	2 (0.4)	123 (33)
Other	-	-	5 (0.9)	10 (3)
Specialty Area				
Critical Care	127 (24)	54 (26)	208 (37)	29 (8)
Oncology Services	56 (11)	29 (14)	54 (10)	73 (20)
Medicine Services	109 (20)	25 (12)	105 (19)	102 (27)
Perioperative Services	33 (6)	37 (18)	48 (8)	59 (16)
Surgical Services	119 (22)	23 (11)	77 (14)	66 (18)
Women's Services	51 (10)	9 (4)	32 (6)	11 (3)
Float	15 (3)	3 (1)	18 (3)	4 (1)
Other	6 (<1)	22 (11)	19 (3)	27 (7)
Missing Data	16 (3)	6 (3)	8 (<1)	0 (0)

* Care Coordinator can include Case Manager, Care Manager, or Social Worker

Table 3.

Identified Barriers to Completing Advance Directives with Patients

	2013 (N= 740)		2017 (N=924)	
	Inpatient (N=532)	**Outpatient (N=208)**	**Inpatient (N=553)**	**Outpatient N=371)**
Barriers	(%)	%	(%)	(%)
I don't have enough time to ask or complete AD	21	24	28	22
Patient is non-verbal or has altered mental status	25	10	22	6
Logistic-related barriers	26	41	11	16
I do not understand the AD choices available to patients	11	9	11	8
The forms/processes are too complicated	9	8	10	8
I feel uncomfortable asking *OR* AD forms do not apply to certain patients	3	1	4	8
I don't remember to ask	5	8	4	5
Other reasons	10	10	7	13

Note: Total does not equal 100% as respondents may have chosen one or more barrier.

Logistic-related barriers:

I do not know where the AD forms are located on the unit.

I do not know where the AD section is located in the Electronic Health Record.

I do not know how to have the AD scanned into the Electronic Health Record.

Examples of other reasons:

Patients are reluctant to discuss or complete.

Not appropriate to discuss in my work setting.

I am a surgical nurse and this is not part of my role.

I don't do this in the Emergency Department.

This is not part of my workflow.

I work in Ambulatory Care and feel it is not relevant to our care.

Table 4.

Suggested Improvements to Completing the Advance Directive (AD)

	2013 (N = 740)	2017 (N = 924)		
	Inpatient & Outpatient	**Inpatient & Outpatient**	**Inpatient**	**Outpatient**
Suggested Improvements	(%)	(%)	(%)	(%)
Develop pop-up reminder in EHR	53	-	-	-
Develop AD algorithm or flow chart	50	-	-	-
Short in-services	25	-	-	-
One-on-one education with palliative care champion	19	-	-	-
Develop scripted phrases for AD conversations	16	-	-	-
Dedicated staff to facilitate advance care planning (ACP)	-	53	30	23
Education	-	47	19	28
Physician commitment to ACP	-	33	19	14
Administrative commitment to ACP	-	22	10	12

Note: Total does not equal 100% as respondents may have offered more than one suggestion.

Survey options for potential suggested improvements varied by survey year. A dash (-) indicates answer options not included that year.