Using the Perspectives of Advanced Practice Providers to Design Strategies to Increase Engagement of Surgical Patients in Advance Care Planning

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Objective: Advanced practice providers (APPs) are essential members of surgical teams. We sought to understand the barriers and facilitators they perceive when participating in advanced care planning (ACP) discussions with patients and use this knowledge to design strategies to promote interprofessional ACP uptake for surgical services and potentially extend ACP discussions and documentation to more patients.

Background: ACP has been challenging to integrate into surgical practice despite being endorsed by national societies and payors as an essential aspect of caring for older adults.

Methods: Using qualitative and quantitative methods, we surveyed and interviewed APPs at a single tertiary academic medical center. A previously validated Likert scale survey of clinician knowledge, attitudes, and experiences with ACP was adapted to include demographic information and details about practice experience.

Results: Of the 88 APPs who were sent our surveys, 46 (52%) responded. Eighty-eight percent of respondents believed APPs play an important role in ACP discussions, 80% believed that ACP information was helpful in guiding clinical care discussions, 71% expressed comfort with discussing ACP with patients, and 59% endorsed comfort with communicating a prognosis to patients. Twelve interviews yielded 3 main themes: (1) clinical and professional benefits of ACP; (2) barriers to APP involvement in ACP; (3) proposed interventions to integrate APPs into ACP.

Conclusions: To increase surgical ACP uptake by APPs, data on proposed ACP interventions must focus on establishing a multi-disciplinary team-based workflow, addressing competing clinical demands, opportunities for additional education, and clarifying the scope of work.

Keywords: advanced care planning, implementation sciences, mixed methods, quality improvement, translational science

INTRODUCTION

Advance care planning (ACP) is the process of understanding and sharing personal values, life goals, and preferences regarding future medical care and allows patients to communicate their medical wishes and make informed medical decisions.[1–3] In the specific field of surgery, multiple national guidelines, including the American College of Surgeons and the Geriatric Surgery Verification Quality Improvement Program, consider the best practice to be engaging patients in ACP and discussions about goals of care before surgical care is initiated, as this helps align treatment intensity with patient preferences to balance short-term risks and longer-term benefits of surgery and manage post-surgical complications.[4,5] However, ACP has been challenging to integrate into the surgical workflow, as surgical teams may struggle to allocate the time and resources to undertake difficult, time-consuming discussions about goals of care.[1,6,7] Additional barriers include varying levels of comfort on the part of surgeons and the surgical care team for conducting these conversations and lack of preparedness on the part of the patients and surrogates.[2,8]

Efforts to increase the uptake of ACP in surgical specialties have traditionally focused on the surgeon, but there remains tremendous potential to involve other members of the surgical care team to assist patients in engaging in ACP discussions.[1,6,9] Advanced practice providers (APPs)—nurse practitioners and physician assistants—play an essential role in addressing the increasing complexity and volume of surgical care, and they should be engaged when building an interprofessional collaborative strategy to facilitate ACP completion.[10] Efforts to involve APPs in ACP have been successfully documented in the primary care setting, but there are no reports in the surgical literature.[11,12] These primary care reports share important lessons in how to increase ACP engagement, and they provide interventions based on longitudinal patient relationships.[13,14] However, surgical practitioners need ACP interventions suited to acute surgical encounters. We sought to identify barriers and facilitators to APP ACP engagement within the context of surgical services to design strategies that would promote team-based uptake of ACP and extend ACP discussions and documentation to more patients.

METHODS

Study Design

Using a cohort study design and qualitative and quantitative methods, we surveyed and interviewed APPs at a single tertiary academic medical center. Inclusion criteria included working as an APP (nurse practitioner or physician assistant) on the following inpatient and/or outpatient adult surgical services at UCSF Health: general, vascular, surgical oncology, endocrine, cardiothoracic, and colorectal. There were no specific exclusion criteria. Participants were identified through an institutional professional database maintained by the Office of Advanced Practice Providers, UCSF Health. The project was approved by the Institutional Review Board at the University of California, San Francisco, and written informed consent was obtained from all participants.

Data Collection

Participants completed an online survey about their perceptions of and comfort with ACP. A previously validated Likert scale survey that assesses clinician knowledge, attitudes, and experiences with ACP[15] was adapted to include demographic information, length of time in practice, and which surgical services APPs had worked on (Supplemental Appendix A, http://links.lww.com/AOSO/A415). The survey was pilot-tested by 3 APPs who were sent the link and completed it on their personal device. The pilot testing showed that the survey was clear to use and did not require further editing. The survey was distributed by email with 2 subsequent reminders in 2-week intervals. Responses were anonymous. All respondents granted permission to use aggregate data submitted. After completing the survey, respondents were asked if they were interested in participating in a 20-minute follow-up interview conducted by the study team. All participants consented to use their interview data for research before audio recording. APPs who completed interviews were compensated for their time with a $25 gift card.

The interview guide was designed with a medical student researcher, 2 surgeons, and 2 APPs following a literature review to illuminate specific barriers and facilitators to APPs engaging patients in ACP (Supplemental Appendix B, http://links.lww.com/AOSO/A416). The guide was pilot-tested with 2 APPs through a mock interview process, and questions were revised based on their feedback. Interview candidates were contacted by email and included all APPs who agreed to be interviewed. Individual semi-structured interviews were performed by a medical student researcher who audio-recorded all interviews using video conferencing, which were then transcribed verbatim by a professional service.[16] We stopped recruitment after obtaining thematic saturation, with enough participants to ensure adequate representation of a range of opinions and sufficient time for each participant to share their experiences.[17,18]

Data Analysis

Study data were collected and managed using REDCap electronic data capture tools hosted at the University of California, San Francisco.[19,20] Qualitative data were analyzed by a team of 4 researchers experienced in using inductive thematic qualitative analysis to determine common themes and insights, and all codes were explicitly defined in a codebook.[21] Each researcher identified themes independently, which were shared with the group along with raw quotes from the text to confirm the dependability of thematic analysis.[22,23] Two analysts coded each transcript independently following a standard template and compared code applications to ensure inter-coder reliability. Discrepancies in code application were resolved through discussion, resulting in consensus-coded documents.[18,24] The coded material was then grouped into major themes and organized into barriers and facilitating factors by all 4 researchers. We analyzed survey data using proportion tests and calculated mean descriptive statistics using Stata v17.[25] Survey data were collected on a Likert scale; because the data were largely bimodal, and to account for the limited selection of some response options, the responses were dichotomized into 'agree' and 'disagree'.

RESULTS

Demographics

In all, 88 APPs were sent the surveys and 52 (59%) responded. Of those, 3 provided demographic data only and 3 others did not complete the Beliefs Scale, leaving a total of 46 completed surveys for analysis (Fig. 1). Table 1 shows that 85% of surgical APPs who responded to the survey were nurse practitioners, 63% of whom had been in clinical practice for 5 or more years. Most practiced exclusively on an inpatient surgical service setting (48%), identified as women (83%) and Caucasian (52%), had a mean age of 40 years old (SD 8.7), and had additional proficiency in languages other than English (46%). Twelve respondents were included in the post-survey interview.

APP ACP Educational Experiences

Of the APPs who responded, 46% reported receiving ACP education during school; topics covered included difficult conversations such as discussing code status and palliative care/hospice, how to help someone create an advanced directive, and medical ethics. Furthermore, 37% of APPs reported receiving on-the-job training education in ACP while employed at our institution. APPs identified asynchronous learning opportunities (65%) and in-person trainings (58%) as necessary interventions to ensure they were better prepared for engaging in and completing ACP. Several APPs also noted that emphasis on ACP by the attending surgeon (37%) would be helpful in integrating ACP conversations into their workflow. Respondents also valued receiving continuing education credit for ACP training (78%).

APP Perceptions, Experiences, and Knowledge of ACP

Eighty-eight percent of respondents believed that APPs play an important role when discussing ACP with surgical patients. Nearly all APPs interviewed (98%) believed that ACP discussions do not hinder or delay clinical care delivery and 80% believed that when an ACP document was available, the information was useful for guiding clinical care discussions (Fig. 2). The majority (71%) of APPs expressed comfort with discussing ACP and 59% said they were comfortable communicating a prognosis to patients, yet 61% identified the attending surgeon as the team member best suited to initiate these discussions. APPs identified several barriers to engaging in ACP conversations, including: ACP discussions take too much time (41%), ACP planning was too upsetting for patients and their surrogates (16%), and the belief that patient wishes were rarely honored (14%).

Qualitative Themes: Benefits of ACP, Barriers to ACP, and Interventions to increase ACP

Table 2 highlights the major themes identified from the analysis of the semi-structured interviews. Theme 1 highlights the clinical and professional benefits of ACP participants identified. Interviewees explained that while engaging patients in conversations about ACP, the patient and the clinician built trust and came to a shared understanding about the patient's values. One participant noted that they had seen "unexpected…outcomes after surgeries…and the ACP planning notes are really helpful to guide conversations with families in those situations." On the clinician side, ACP conversations also provide an opportunity
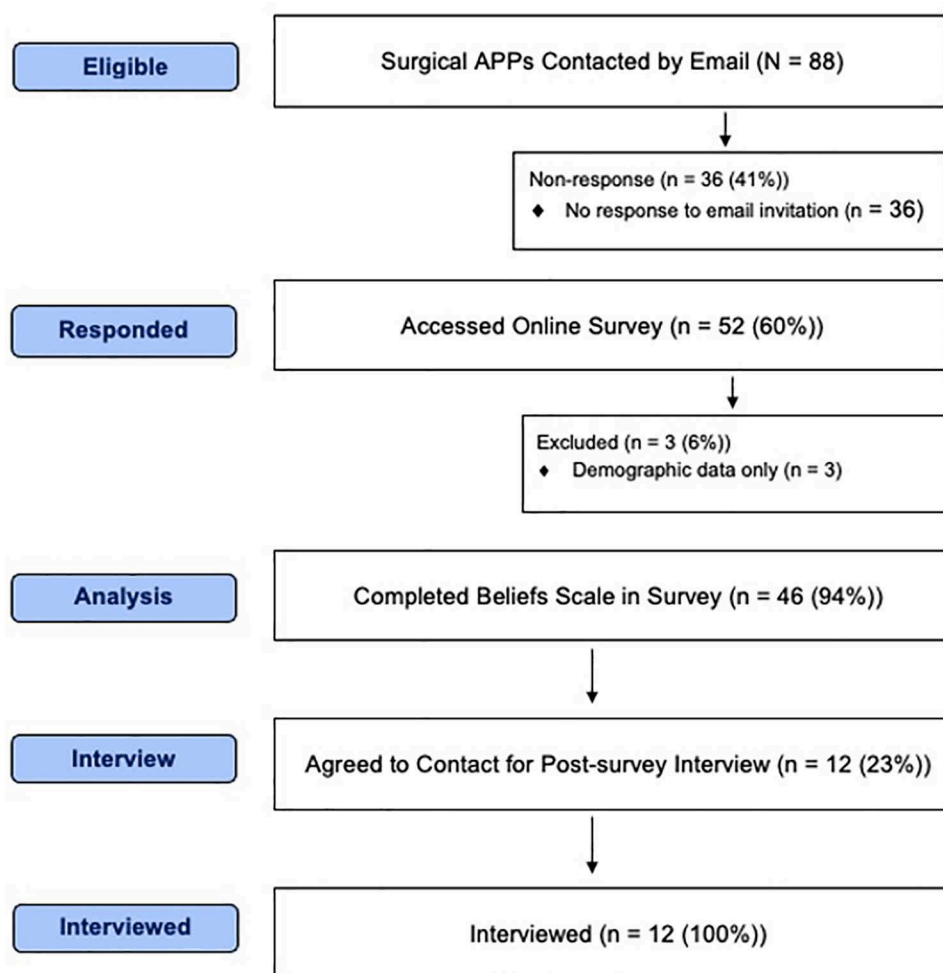
FIGURE 1. Advanced practice professional (APP) response to survey.

to foster interprofessional collaboration, as ACP conversations often require input from different members of the care team and from different specialty services: "I actually think it's a combination…the [Attending and APP]…would be the best choices." Furthermore, participants emphasized that the presence of ACP documentation reduces uncertainty and helps guide care decisions during unexpected clinical outcomes. One participant noted, "I've seen unexpected…outcomes after surgeries…the ACP planning notes are really helpful to guide conversations with families in those situations."

Theme 2 highlights that barriers to APP involvement in ACP persist. Participants described not knowing whether holding these ACP conversations was within their responsibilities in the absence of a workflow that specifically prompted them to do so: "I think a lot of APPs don't feel like it's their place to have these conversations when it 100% is." Compounding this uncertainty is that APPs had many competing clinical demands and need to prioritize their discussions within the limited time with each patient: "Time…is a huge factor on how much time [APPs] can really spend with patients having these conversations when there's already so much to cover about their surgery and what's coming up for them in their hospital experience." Participants noted that some APPs may have been more prepared than others to have ACP conversations, either due to previous training or past experiences with ACP. Additionally, APPs without adequate experience were hesitant due to the perceived intensity of ACP conversations.

To address the barriers discussed above, participants offered several interventions that could help facilitate APP engagement

with ACP conversations, highlighted in theme 3. Interviewees noted the presence of a surgeon champion who delineates expectations about how and when to engage patients in ACP and introduces the concept of ACP to patients early in care would help promote ACP engagement. APPs identified electronic health record support materials, such as standardized templates, as potential facilitators to increase APP ACP uptake. Several participants noted that creating a standardized workflow to establish conversation timing would improve ACP quality and APP engagement: "I think it would be helpful to have...a universal framework for how these discussions should happen…just having a plan makes people feel more comfortable about having the conversation to begin." Additionally, APPs who have more experience with ACP conversations may help model conversations and train ACPs with less experience. APP engagement with ACP conversations is also facilitated when patients were more comfortable discussing topics related to ACP. One participant observed that ACP "is definitely not something they're prepared for. We would want them to be prepared for the discussion and not just to bring the discussion up." This APP proposed that "giving people some pre-discussion literature" would facilitate conversation "when [patients] come for their preop visit with us."

DISCUSSION

This study shows that while there is tremendous potential to increase APP uptake of ACP on surgical services, systemic barriers must be addressed to support this team-based approach. As essential members of the perioperative care team, APPs were

TABLE 1.

Characteristics of Advanced Practice Providers Who Returned the Survey

Characteristic	Total (N = 46)
Age; mean (SD)	40 (8.7)
Female gender identity (N, %)	38 (82.6)
Race/ethnicity (N, %)	
White	24 (52.2)
Asian	9 (19.7)
Latino/Latina	10 (21.7)
Black or African American	1 (2.2)
Pacific Islander	1 (2.2)
Prefer not to say	1 (2.2)
Proficiency language other than English (yes) (N, %)	19 (45.7)
Spanish fluency	13 (28.3)
Tagalog fluency	3 (6.5)
Cantonese & Mandarin fluency	2 (4.3)
Japanese fluency	1 (2.2)
Job classification, (N, %)	
Nurse practitioner	39 (84.8)
Physician's assistant	7 (15.2)
Years in practice (N, %)	
<1 year	1 (2.2)
1–5 years	16 (34.8)
6–10 years	16 (34.8)
>10 years	13 (28.2)
Practice setting (N, %)	
Inpatient exclusive	22 (47.8)
Outpatient exclusive	19 (41.3)
Inpatient & outpatient	5 (10.9)

both ready (80% valued ACP) and willing (85% agreed ACP could be included in the APP workflow) to engage patients in ACP.[11,13] Despite this enthusiasm, APPs described competing clinical demands, variation in experience with ACP discussions, and a scope of work that does not currently include dedicated time for ACP as barriers to engaging in an integrated surgical ACP practice. These barriers for APPs working on surgical clinical services are consistent with current literature that describes barriers to ACP engagement for nurses[26,27] in primarily the outpatient setting and also echo the barriers expressed by surgeons.[2,8]

Surgeons and APPs work closely together, with both roles essential to providing the highest quality care to surgical patients.[10] APPs interviewed for this study emphasized the importance of a unified message about the importance of ACP presented by both the surgeons and the APPs to promote patient engagement and to ensure that adequate work time is allowed for the discussions. The presence of a surgeon champion who emphasizes the importance of ACP to providing high-quality surgical care sets a professional cultural expectation that encourages all members of the care team, including APPs, to prioritize ACP conversation and documentation. Among APPs interviewed, 40% thought that the attending should initiate ACP-related discussions with the patient and that having a 'surgeon champion' would be integral to APP-led ACP. Emphasizing the importance of ACP is crucial to this team-based approach by empowering all members of the surgical care team to engage patients directly in goals-of-care conversations. To address the need for integration of surgeon and APP ACP-related practices, team members attended surgical service leadership meetings and surgical APP service meetings. We also aimed to highlight in our weekly joint faculty, resident, and APP case conferences examples of where ACP helped with complex medical decision-making and examples of where ACP was missing but would have been helpful to making patient care decisions, with the goal of encouraging team members to integrate ACP into their daily workflow (Fig. 3).

APPs interviewed also thought that ACP-related discussions could be facilitated by system-based support and a standardized workflow. To this end, we created an electronic health record (EHR) template based on the American College of Surgeons Geriatric Surgical Verification that has standardized ACP documentation in the inpatient setting.[28] This template serves as both a discussion prompt and means of documentation, which can help facilitate ACP discussions for clinicians who may not be as familiar with the practice. Almost half (40%) of APPs noted concerns about the length of time ACP requires. Our surgical ACP templates are brief tools that enable surgical providers to engage patients in targeted ACP discussion most relevant to their perioperative care. Previous studies have shown that EHR platforms can be used to improve the frequency, consistency of documentation, and quality of goals-of-care conversations.[29] To further address differences in experience and comfort, we created pocket cards with a series of questions designed to facilitate
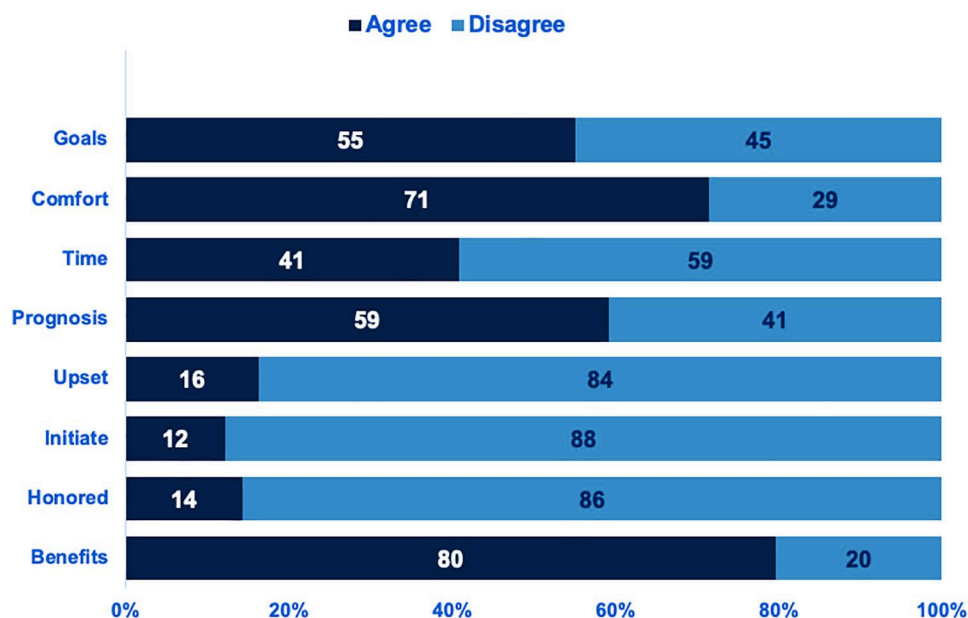

FIGURE 2. Advanced practice providers (APP) beliefs, knowledge, and experiences with advanced care planning (ACP).

TABLE 2.

Qualitative Themes Identified from Semi-Structured Interviews of Advanced Practice Providers

Theme	Subtheme	Illustrative Quotes
Clinical and professional benefits of ACP	Build trust and shared understanding	"I had a nice trail of ACP notes that I was able to file from pretty early on in my interactions with [the patient] and his family and [the ACP documentation] established my relationship with them and the conversations that we had … really laid a nice map. When I brought up that we really needed to shift goals of care or at least have a conversation about it, I had all those conversations and that documented…"
	Facilitates interprofessional collaboration	"I actually think it's a combination…the [Attending and APP]…would be the best choices."
	Reduces uncertainty	"I've seen unexpected…outcomes after surgeries…the ACP planning notes are really helpful to guide conversations with families in those situations."
Barriers to APP involvement in ACP persist	Competing clinical demands	"Time…is a huge factor on how much time [APPs] can really spend with patients having these conversations when there's already so much to cover about their surgery and what's coming up for them in their hospital experience."
	Variations in training and experience	"As part of my fellowship, there were these advanced communication classes with patients, which were exceedingly helpful. They make you do roleplaying, and stuff like that. So to have that be available for everyone [would be] helpful."
	Unclear scope of work	"I think a lot of APPs don't feel like it's their place to have these conversations when it 100% is."
Interventions to integrate APPs into ACP	Need for a surgeon champion	"Feeling like we have the permission to have these conversations from our attendings."
	System-based support, standardized workflow, and improved education	"I think it would be helpful to have, like, a general kind of universal framework for how these discussions should happen…just having a plan makes people feel more comfortable about having the conversation to begin."
	Enhanced patient preparedness	"Giving people some pre-discussion literature or something like that, and then when they come for their preop visit…we can have the discussion then. But [ACP is] definitely not something they're prepared for. We would want them to be prepared for the discussion and not just to bring the discussion up."
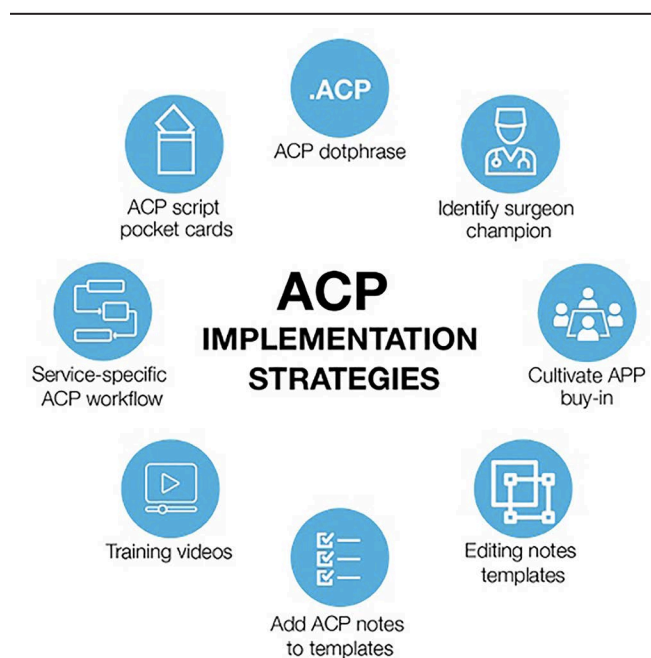
FIGURE 3. Implementation strategies to increase uptake of advanced care planning.

ACP discussions and designed and produced a short training video to accompany pocket card disbursement.

Most literature regarding APP participation in facilitating ACP planning describes outpatient, nonsurgical settings.[11–13,30] Successful techniques of incorporating ACP into existing clinical workflows in nonsurgical settings include creating a standardized care pathway to facilitate the completion of new ACP documentation and creating ACP APP competencies that address domains such as clinical practice, communication, advocacy, and therapeutic management.[14,31] The interventions we designed build upon these primary care strategies and adapt them to the specific needs of the surgical clinical environment. Through harnessing the EHR, creating and disseminating easy-to-use communication tools, and working with different surgical services to identify opportunities to modify clinical workflow to efficiently incorporate ACP, we demonstrated that strategies used in different specialties to increase ACP can be tailored for and implemented by APPs working in surgical settings.[32]

Interventions at the policy and curriculum level are also crucial to increase the participation of APPs in having and documenting ACP discussions with surgical patients. Incorporation of ACP into routine APP professional practice workflow may enhance patient-centered aligned care, improve quality of care, be scalable, and possibly economical.[13,27] It is possible for APPs to bill for ACP discussions, creating a sustainable economic model that offers protected time for ACP care delivery.[12] Moreover, suboptimal education and inadequate curriculum content have been suggested as barriers for the successful completion of ACP among interprofessional health professionals.[33,34] By including education and training that focuses on preparing APPs for both difficult conversations broadly, and for ACP more specifically, nursing graduate programs can promote APP preparedness for these often deeply personal conversations.[35]

Limitations to this study include that it took place at a single, tertiary academic medical center, which means the scalability of incorporating APPs into team-based ACP at nonacademic centers would need further study. This study focused on building an APP workflow that harnessed the roles of both surgeons and APPs to promote surgical ACP engagement. Applicability to departments without a large APP workforce would require other members of the surgical care team to be identified who could take on the role of initiating ACP conversations with

patients. Another limitation is the homogenous population of the interviewee population and the small participant sample size, limiting the external validity of the results of this study. Repeating this study with a larger sample size would be a valuable next step in better understanding how best to incorporate APPs in the ACP workflow.

In conclusion, attempts to increase surgical ACP uptake can focus on creating a multi-disciplinary team-based ACP workflow. Involving APPs in discussing and documenting patients' preferences and goals in a timely fashion, that is specific to the surgical encounter, makes it possible to provide care that aligns with both perioperative-specific and long-term goals.

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