

Understanding Advanced Practitioner Prescriptive Privileges for Anticancer Therapies: A National Survey

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

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Abstract

Oncology advanced practitioners (APs) work in collaboration with physicians to provide high-quality, specialized oncology care. Data are lacking on individual AP function within different practice settings, specifically around the prescribing of anticancer therapies. Our primary aim was to conduct a prospective, national, web-based survey to understand AP roles in prescribing anticancer therapies and the related privileging process(es) in both academic and community oncology practice settings. A 38-question survey was developed based on a review of published oncology AP data sets, expert input, and cognitive interviews with key AP informants. Survey domains included basic respondent demographics, practice setting information, and prescribing and privileging practices. The survey was distributed by the Association of Community Cancer Centers (ACCC) and the Advanced Practitioner Society for Hematology and Oncology (APSHO) in late 2022. 180 individuals responded, and 135 oncology APs completed the survey. The majority of respondents practice in states that allow prescriptive privileging for anticancer therapies. Only half of those that have prescriptive privileging have an established privileging and competency process at their practice setting. Among the nurse practitioners and physician assistants practicing in primarily independent roles, only about half can prescribe both standard-of-care and investigational therapies. This national survey provides valuable insights into the prescribing practices of oncology APs. The findings highlight the need to further develop standardized privileging and competency strategies within the AP community. By addressing these gaps, APs can play a crucial role in addressing workforce shortages in oncology and optimizing patient outcomes.

Oncology advanced practitioners (APs) include nurse practitioners (NPs), physician assistants (PAs), pharmacists, and clinical nurse specialists (CNSs), all of whom work in collaboration with physicians to provide high-quality, specialized cancer care. In 2014, the American Society of Clinical Oncology (ASCO) projected a significant shortage of oncologists by 2025. This is multifactorial in nature but compounded by the aging physician workforce, growing US population, and increasing number of cancer survivors, resulting in a 40% growth in demand for oncology services (Yang et al., 2014). This workforce shortage creates an opportunity to expand the services and clinical support provided by APs. During this process, it is critical to ensure that APs are well trained and privileged to function at the top of their scope of practice.

Advanced practitioners have the potential to provide comprehensive oncology services, including treatment monitoring, education, side effect and symptom management, coordination of care, surveillance, survivorship, and palliative or end-of-life care. While APs are integral members of the cancer care team, there is a lack of uniformity and information known about how individual APs function within different practice settings, specifically around the prescribing of anticancer therapies (for example, chemotherapy or immunotherapy). Understanding the current state of AP operational workflows, prescribing practices, privileging requirements, and competency demonstration across the US will facilitate standard definitions and expansion of the scope of AP services while providing safe and efficient care delivery.

METHODS

Setting and Subjects

We conducted an online survey of oncology APs through the Association of Community Cancer Centers (ACCC) and the Advanced Practitioner Society for Hematology and Oncology (APSHO). Advanced practitioner members of both organizations recognized by relevant credentials and/or job titles and with active email addresses were identified to form a main list. Duplicates were removed. We sent out survey invites via

Qualtrics to 7,853 distinct emails requesting their input between October 20, 2022, and November 29, 2022. The email outreach consisted of an initial message followed by reminder emails at 2 and 5 weeks following the initial email.

Survey Development

The 38-question survey was designed based on a review of published oncology AP data sets and cognitive interviews with key AP informants. Survey domains included basic respondent demographics, practice setting information, and prescribing and privileging practices. A statement of implied consent was embedded into the introduction, with access to the full consent via a hyperlink. To test the utility and feasibility of the survey, a pilot was conducted with 17 respondents from APSHO committees. The University of California San Diego's (UCSD) institutional review board approved all research procedures.

RESULTS

Demographics

One hundred eighty individuals responded to the survey (180/7,853; 2.3% response rate), and analysis was performed on the data from 135 who completed all survey questions. The oncology APs who participated in the survey included 67% ($n = 91$) NPs, 20% ($n = 27$) PAs, 11% ($n = 14$) pharmacists, and 2% ($n = 3$) CNSs. The large majority, 80% ($n = 108$), of oncology APs worked in an outpatient setting, and 10% ($n = 13$) worked in both inpatient and outpatient settings. Respondents represented a fair distribution across academic (40%) and community (34%) cancer programs. Other represented practice types included hospital-based practice, National Cancer Institute (NCI)-designated cancer centers, private practice, and a small percentage of Veterans Affairs cancer programs and NCI Community Oncology Research Programs. Most respondents were from the southern (43%, $n = 59$) and western (32%, $n = 24$) regions of the US (Table 1).

AP State Board Prescriptive Privileging and Credentialing

Of the total respondents, the majority, 73% ($n = 98$) of APs reported practicing in states where boards allow prescriptive privileging for

Table 1. Participant Demographics (N = 135)

	<i>n</i> (%)
Profession	
Clinical nurse specialist	3 (2)
Nurse practitioner	91 (67)
Pharmacist ^a	14 (11)
Physician assistant	27 (20)
Primary practice setting	
Inpatient	14 (11)
Outpatient	108 (80)
Both	13 (10)
Cancer program designation^b	
Academic/university program	54 (40)
Community cancer program	46 (34)
Hospital-based practice	30 (22)
NCI Community Oncology Research Program	7 (5)
NCI-designated cancer center	31 (23)
Private/physician practice	23 (17)
Veterans Affairs cancer program	2 (1)
Geographic region	
South	59 (43)
Midwest	28 (21)
Northeast	16 (12)
West	32 (24)
Years in practice	
< 1	7 (5)
1-5	41 (30)
6-10	39 (29)
11-15	26 (19)
16-20	6 (5)
> 20	16 (12)

Note. ^a50% of pharmacists reported they provide patient care under a collaborative practice agreement.

^bDesignation categories are not mutually exclusive, thus percentages do not equal 100.

anticancer therapies. Nine percent ($n = 12$) reported they are restricted by their state board, and 18% ($n = 25$) reported they were not aware of their state board regulations for APs' ability to prescribe anti-cancer therapies (Figure 1).

Twelve of the respondents reported their state board does not allow APs to prescribe anticancer therapies. Thus, of the remaining AP respondents

Does your state board allow advanced practitioners to prescribe anticancer therapies?
($N = 135$)

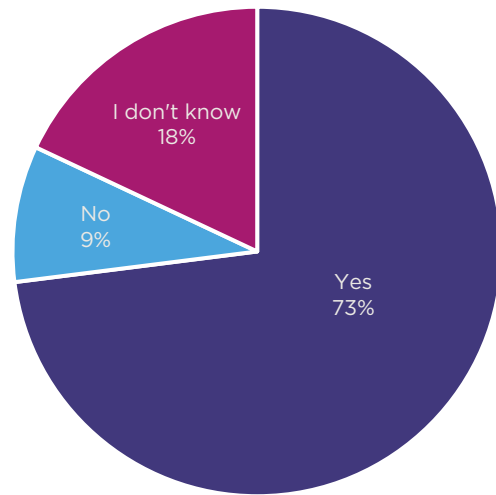


Figure 1. Survey results to the question “Does your state board allow advanced practitioners to prescribe anticancer therapies?” ($N = 135$.)

who may be allowed to prescribe anticancer therapies ($n = 123$), only 47% report having an established credentialing process for prescribing anticancer therapies (Figure 2).

AP Prescribing Practices

Among the APs who report having prescriptive privileges to sign standard-of-care and/or investigational therapy orders, the large majority are NPs and PAs. Focusing on the NP and PA respondents, 65 were NPs and 19 were PAs. Seventy-three percent ($n = 48$) of NPs report primarily independent practice. Forty-three percent ($n = 28$) report they prescribe standard-of-care medications only, and 44% ($n = 29$) report prescribing both standard-of-care and investigational therapies. Among PAs, 78% ($n = 15$) report primarily practicing independently. Fifty-seven percent ($n = 11$) report prescribing standard-of-care anticancer therapies only, and 36% ($n = 7$) report prescribing both standard-of-care and investigational anticancer therapies (Figure 3).

DISCUSSION

To our knowledge, this survey is the first attempt to gain an understanding of AP prescriptive privileges and practices among community and academic oncology centers across the nation.

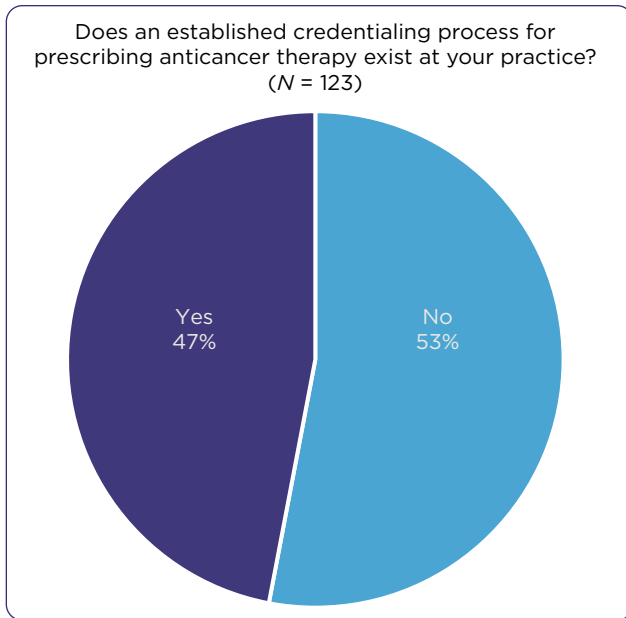


Figure 2. Survey results to the question “Does an established credentialing process for prescribing anticancer therapy exist at your practice? (N = 123.) Note that 12 respondents said their state board does not allow advanced practitioners to prescribe anticancer therapies.

Given the increasingly collaborative involvement of APs in oncology care, we have an opportunity to understand current practice patterns, state prescriptive regulations, privileging, and competency requirements. Our survey was able to collect this information among APs nationally with an equal distribution among various practice settings, including academic settings, community cancer programs, NCI-designated centers, and private practices.

Current Practice

Our study highlights that most AP respondents (73%) are allowed to prescribe anticancer therapies. However, 18% of the respondents were unaware if their state board allows prescriptive privileging, and 9% are not allowed to prescribe. Given the variation of prescriptive authority across states, some APs who practice independently are unable to work at the top of their scope of practice by prescribing anticancer therapy. This may be why our data show that a significantly lower percentage of respondents reported being able to prescribe anticancer therapies despite reporting primarily independent practice. Independent

practice ideally would not have limitations on prescribing practices. There may be variation in how different APs’ independent practice is perceived and thus is more restrictive.

The role of the AP is variable across practice settings. Advanced practitioners provide care in both shared and independent models; however, the majority see patients in follow-up including treatment-related visits (Austin et al., 2021; Bruinooge et al., 2018). Thus, limiting prescriptive practices can be a barrier to APs working at the top of their licensure, and hinders the efficiency and safety of seeing patients independently for treatment visits. During an independent visit, the AP is the provider who is performing the clinical assessment, discussing symptoms, conducting the examination, reviewing laboratory data, and can make an assessment about the appropriateness of treatment based on integration of this data from the visit.

Credentialing

Advanced practitioner education does not uniformly cover anticancer therapy prescribing. There is a need, therefore, for standardized education and training to support safe AP anticancer therapy prescribing. How APs are trained and credentialed is another important aspect of prescribing anticancer therapies. Our study found that only about half of the APs surveyed report having an established credentialing processes for prescribing anticancer therapies within their practice setting. Until recently, anticancer prescribing education courses and resources for APs have been lacking. Historically, the Oncology Nursing Society (ONS, n.d.) has offered courses and resources for nurses, but these have been focused on medication administration, cancer treatment types, and side effects of anticancer therapies rather than the foundation of prescribing for APs. As part of ensuring adequate training for all APs, APSHO has recently created a peer-reviewed comprehensive Cancer Therapy Prescribing Course (CTPC) as a way of standardizing the education for oncology APs, specifically around prescribing anticancer therapies. The CTPC contains 19 modules that cover cancer therapeutics (chemotherapy, immunotherapy, cellular therapy), toxicity management, safe

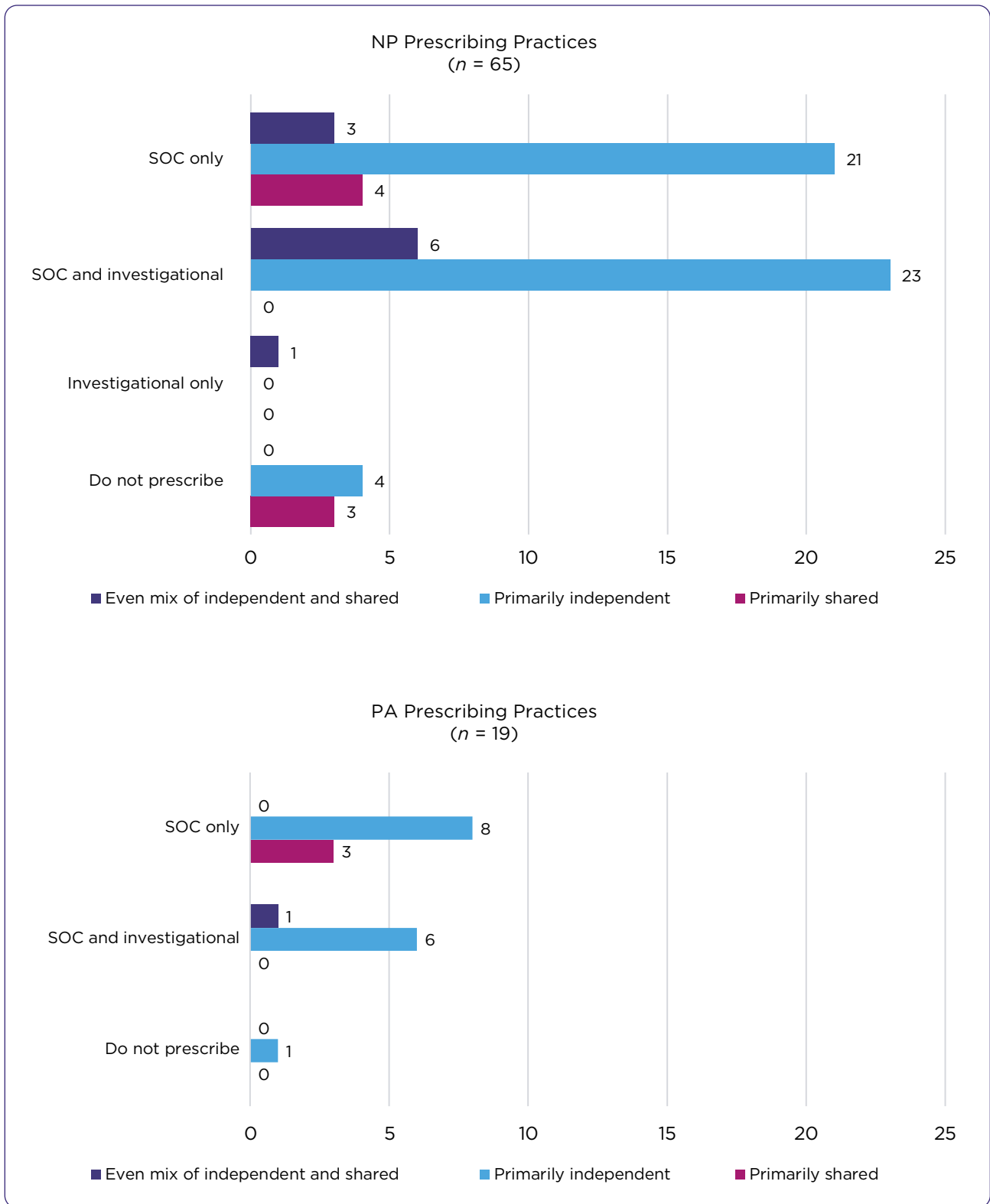


Figure 3. Prescribing practices among NPs (n = 65) and PAs (n = 19). Total N = 84. Note that 12 respondents said their state board does not allow APs to prescribe anticancer therapies, and 25 respondents said they did not know if their state board allows APs to prescribe anticancer therapies. SOC = standard of care; NP = nurse practitioner; PA = physician assistant.

prescribing practices/dosing, assessments prior to dosing, managing infusion reactions, clinical trials, and patient education. The CTPC can be utilized as a tool by institutions as part of the credentialing process for APs to prescribe anticancer therapies in conjunction with appropriate mentorship or proctoring.

In addition to requiring specific educational modules for APs prior to prescribing, practices may consider a specific proctoring protocol and ongoing maintenance requirements as part of a credentialing process to maintain AP privileging. At UCSD, there exists a comprehensive antineoplastic therapy ordering protocol that outlines supervision, guidelines, monitoring parameters, and competency assessments to grant and maintain privileging for APs at UCSD Moores Cancer Center (Ajmera, 2019). In addition to having the didactic education or oncology experience as an AP, UCSD APs must document 20 co-signed orders with review and oversight by an attending oncologist. This proctoring of real clinical practice is to be documented and submitted as support for privileging.

Advanced practitioners can serve as leaders and advocates for other APs by participating in their institution's credentialing committee. This survey found that among the APs who report having a credentialing process, a minority report knowing if an AP serves on their credentialing committee. There is a definite need for more advocacy and AP representation at the state and institutional/practice level to move the needle forward with regard to prescriptive privileging for anticancer therapies. As the oncologist shortage is imminent and the need for qualified oncology APs is growing (Hinkel et al., 2010), standardized education as well as advocacy is paramount for APs to be able to work at the top of their licensure and be able to prescribe anticancer therapies for the best care of our patients.

Limitations

We acknowledge that this study has limitations. First, this was a convenience sample, and second, the response rate was low. This was an uncompensated survey, and there has been a significant amount of survey apathy reported anecdotally by professional health-care associations. Although

the survey was sent to over 7,000 unique emails and two email reminders were sent, we had just over a 2% response rate. Also, our distribution list between ACCC and APSHO only provided access to current AP members. Given such a small analysis sample size, this may not be representative of the full AP prescribing landscape. Regardless, it does begin to provide critical benchmarking data.

FUTURE DIRECTIONS

These data lay the groundwork for the oncology community to begin to understand anticancer prescribing practice among APs. It allows for individual APs as well as institutions and oncology organizations to review current practice patterns and utilize these findings to expand and improve the anticancer prescribing practices of oncology APs by ensuring a formalized and supportive process for privileging and credentialing APs within their organization. Additionally, optimizing APs' prescriptive privileging will further facilitate collaboration of physicians and APs to optimize the delivery of health care.

These survey findings, coupled with appropriate credentialing tools and procedures, gives a basis to grow oncology APs' competency in an extremely important part of cancer care. Moving AP practice forward in terms of anticancer therapy prescribing is past due, especially in the current landscape of an aging population, a growing number of cancer survivors, and the looming oncologist shortage. ●

Disclosure

The authors have no conflicts of interest to disclose.

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