

# The Value of the Advanced Practitioner in Hematology and Oncology: Establishing Benchmarks

SANDRA KURTIN,<sup>1</sup> PhD, ANP-BC, AOCN®, FAPO, MAILEY L. WILKS,<sup>2</sup> DNP, APRN-CNP, HEATHER KONIARCZYK,<sup>2</sup> MSN, APRN-CNP, AOCNP®, NICOLE DELINE,<sup>3</sup> MSN, APRN, FNP-C, AOCNP®, SARA TOTH,<sup>4</sup> FNP-C, AOCNP®, AGN-BC, ANDREA EDWARDS,<sup>5</sup> PA-C, SCOTT ROWLEY,<sup>6</sup> DNP, APRN-CNP, AOCNP®, JASON ASTRIN,<sup>7</sup> DMSC, MBA, PA-C, DFAAPA, and WENDY VOGEL,<sup>8</sup> MSN, FNP, AOCNP®, FAPO

From <sup>1</sup>The University of Arizona Cancer Center, Tucson, Arizona; <sup>2</sup>Cleveland Clinic, Taussig Cancer Institute, Cleveland, Ohio; <sup>3</sup>Tennessee Oncology, Nashville, Tennessee; <sup>4</sup>Texas Oncology, Fort Worth, Texas; <sup>5</sup>Virginia Oncology Associates, Newport News, Virginia; <sup>6</sup>The Ohio State University Comprehensive Cancer Center, The James Cancer Hospital and Solove Research Institute, Columbus, Ohio; <sup>7</sup>The US Oncology Network, The Woodlands, Texas; <sup>8</sup>Advanced Practitioner Society for Hematology and Oncology, Newtown, Pennsylvania

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

Correspondence to: Sandra Kurtin, PhD, ANP-C, AOCN®, FAPO, The University of Arizona Cancer Center, 3838 N. Campbell Avenue, Tucson, AZ 85719-1454. E-mail: sandrakurtin@gmail.com

<https://doi.org/10.6004/jadpro.2023.14.7.11>

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## Abstract

Advanced practitioners (APs) in hematology and oncology (heme/onc) practice and provide oversight across myriad settings, including outpatient, inpatient, specialty centers, infusion centers, and other care settings. Understanding the complexity of care within the specific role APs play in providing day-to-day services across the oncology service line and throughout the continuum of care is critical to developing productivity metrics that adequately reflect the value and scope of the heme/onc AP role. Productivity metrics specific to APs are lacking. Physician models, commonly applied to APs, do not adequately reflect the changing landscape of oncology services, and more importantly do not capture nonbillable services APs provide that are essential to run a practice safely, effectively, and efficiently. Here we describe results of the APSHO Productivity, Burnout, and Work-Life Balance Survey deployed to APSHO members in October 2022 with insight into the day-to-day workload of heme/onc APs, levels of burnout, and perceptions of work-life balance in their current role. Results of the survey confirm the significant amount of time APs spend performing tasks that are not billable but are crucial for access to care and treatment, patient safety, practice efficiency, and downstream revenue. Imperative to an agile and stable heme/onc workforce is an AP leadership structure. Advanced practitioner leaders are at the cornerstone of AP retention, yet metrics for measuring AP leader productivity are also lacking. Now, more than ever, it is essential to accurately describe and assign value to the broad scope of services APs and AP leaders bring to heme/onc practices.

The increasing number of cancer survivors, current and anticipated shortage of oncologists, particularly in rural settings, and the growing complexity of cancer care have increased the demand for advanced practitioners (APs) in hematology and oncology (heme/onc) across practice settings. Advanced practitioners recruited to heme/onc may come from specialties other than oncology and may have little or no experience as an AP. New APs have limited experience in navigating professional practice as a provider. The robust scientific innovation in heme/onc, including a pipeline for new and novel therapeutics, many of which require specialty services for safe delivery, requires a level of service that not too long ago would require inpatient (IP) care (Nierengarten, 2022; Siegel et al., 2023). Delivering this complex level of oncology care in the outpatient (OP) setting has created a day hospital model that requires expanded staffing, ancillary services, and expanded AP oversight.

Collectively, this creates an enormous learning curve for APs without oncology or AP experience and requires constant training and education for experienced APs. Although entry into practice for most APs includes post-graduate education, most programs do not provide dedicated heme/onc curriculums, and coordinating heme/onc clinical experiences during academic programs is largely left up to the individual AP. More recently, AP heme/onc fellowships have begun to provide comprehensive education and training for small groups of APs and have demonstrated improvement in clinical skills and job satisfaction (Hill & Sawatzky, 2011; Hwa et al., 2020). While a great start to building better standards for AP education, training, and onboarding, these programs are not accessible to most APs.

## SCOPE AND VALUATION OF THE HEME/ONC AP

Oversight of this level of care requires providers onsite with the skills, knowledge, and support staff to manage a broad scope of diagnoses, patient acuity, including emergent care, and ancillary services (onsite pharmacy, lab, infusion suite, and others) to safely provide care in the OP setting. Patient acuity in the OP setting has increased substantially, requiring larger centers to increase hours and

days of service including weekends, and in some cases, run OP oncology urgent care centers. Smaller practices may require a network of ancillary facilities to augment infusion suites to provide the scope of services required to meet the needs of this complex patient population. Collectively, this demands an agile and fully prepared workforce accustomed to a constant state of change.

The implications of these demands are widespread. The agility of health-care systems to respond to the continuous influx of regulatory, organizational, and scientific mandates requires fluid staffing models, workflows, and electronic health record (EHR) support. Advanced practitioners play a critical role in this process, particularly AP leaders. Quantifying AP contributions to implementing change is lacking. Advanced practitioners as agents of change will be discussed elsewhere in this supplemental issue to *JADPRO* (Kurtin et al., 2023a).

Valuation of the AP role is complex. There are currently no standards or professional benchmarks specific to heme/onc APs. Rather, published productivity benchmarks for physicians have been applied to AP valuation, with the assumption and expectation that the same benchmarks accurately measure AP productivity. The fact that APs practice across myriad oncology subspecialties and diverse practice settings, with varied role utilization patterns, expectations, and responsibilities, contributes to the lack of clarity and broad discrepancies in valuation models.

Corporate benchmarks used for physician compensation plans such as SullivanCotter or Merritt Hawkins are largely focused on salary negotiation with benchmarks set for physician salaries and corresponding productivity expectations based on specialty and region. Merritt Hawkins publishes a review of physician and AP recruiting incentives report providing an overview of the salaries, bonuses, and other incentives used to recruit physicians, physician assistants (PAs), nurse practitioners (NPs), and certified registered nurse anesthetists nationally.

A key finding of the Merritt Hawkins (2022) review was that the number of NPs completing their training programs each year exceeds the number of medical residents in all specialties who complete physician training. What is lacking in these surveys is an AP-specific metric for expected productivity.

Current metrics applied to heme/onc AP productivity vary across practice types (Table 1). The most common measures used are those that are easily quantified (visit volume, billed visits, template fill rates). Each of these metrics has inherent flaws when applied to AP valuation. Indirect patient care activities are generally considered nonbillable as they cannot be tied directly to a patient visit. Yet, most of these activities are required to safely integrate scientific advances and ever-changing standards of care, and maintain safe, efficient, and high-quality cancer care. Most APs report no dedicated time allocated to complete these nonbillable but essential tasks, contributing to a perceived lack of time and an imbalance in work-life balance (Kurtin et al., 2023b).

## NEED/RATIONALE FOR THE SURVEY

The Advanced Practitioner Society for Hematology and Oncology (APSHO) is committed to

supporting all members of APSHO. Two prior APSHO-supported publications have described the scope of the AP role relative to direct patient care (Kurtin et al., 2015; Vogel, 2016). However, indirect functions, tasks that are essential to improved patient outcomes and positive patient experience, have not been effectively integrated into the valuation of the AP role. Furthermore, heme/onc AP leadership structures and metrics have largely been ignored. Given the number of APSHO members involved in providing direct patient care, particularly OP care, the APSHO Professional Development and Leadership (PD&L) Committee, APSHO Leadership Summit members, and the APSHO Board of Directors (BOD) developed and subsequently launched the APSHO Productivity, Burnout, and Work-Life Balance Survey to describe both direct and indirect activities for APs involved in direct patient care to begin to quantify and develop metrics and benchmarks for valuation.

**Table 1. Productivity Metrics Applied to the Valuation of Hematology/Oncology Advanced Practitioners**

Metric	Definition	Significance
Visit volume	Number of visits per schedule block/template/day	<ul style="list-style-type: none"> <li>• APs do not control the volume of patients placed on their templates</li> <li>• Does not include nonbillable activities</li> </ul>
Template fill rate	Percentage of open slots in the template filled	<ul style="list-style-type: none"> <li>• APs do not control the volume of patients placed on their templates</li> <li>• Does not include nonbillable activities</li> </ul>
wRVU	Work relative value unit	<ul style="list-style-type: none"> <li>• Billed visits based on CMS E/M level coded (complexity) × set dollar amount determined by cFTE for role</li> <li>• Most common and straightforward metric</li> <li>• APs do not control the volume of patients placed on their templates and see new patients less often (highest E/M billed rate)</li> <li>• Does not include nonbillable activities</li> </ul>
cFTE	Clinical full-time equivalent	<ul style="list-style-type: none"> <li>• Percentage of time allocated to direct patient care, used to calculate wRVU</li> <li>• Does not include nonbillable activities</li> </ul>
acFTE	Adjusted clinical full-time equivalent	<ul style="list-style-type: none"> <li>• May be applied to account for indirect patient care or administrative duties</li> <li>• Accounts for nonbillable activities</li> </ul>
aFTE	Administrative full-time equivalent	<ul style="list-style-type: none"> <li>• May be applied to acFTE or to AP leaders</li> <li>• Accounts for protected time</li> </ul>
Days to access/ access to care	Time to visit for new patient	<ul style="list-style-type: none"> <li>• Prolonged time to access may result in patients seeking care elsewhere and loss of patients to the practice</li> <li>• APs may improve time to access for new patients if they (1) see new patients or (2) move patients from the physician to the AP template to create slots for the physician (follow-up shift)</li> </ul>

Note. AP = advanced practitioner; CMS = Centers for Medicare and Medicaid Services; E/M = evaluation and management.

## METHODS

A customized online survey was developed in collaboration with the APSHO PD&L committee and APSHO BOD, and deployed on the Mind Garden platform. Mind Garden is an international publisher of psychological assessments, including the Maslach Burnout Inventory™ (MBI) for health-care professionals and the Areas of Worklife Survey (AWS). Customization included elements of a time-motion study developed by the APSHO PD&L committee during the APSHO Leadership Summit aimed at capturing data related to workload, role, and AP experience. Burnout and work-life balance were measured using validated tools as described in the article by Kurtin and colleagues (2023b).

The survey was sent by email to APSHO members in mid-October 2022. Data were gathered through February of 2023. A total of 416 APs (12% of total membership) completed the questionnaire, and of these, 366 (88%) completed all items on the MBI and AWS.

## RESULTS

These results will focus on NPs and PAs involved in direct clinical care or who manage APs providing direct clinical care ( $n = 381$ ) as members of the heme/onc provider workforce. Additional results for the entire group of APSHO members completing the survey are discussed elsewhere in this supplement (Kurtin et al., 2023b). Demographics specific to NPs ( $n = 317$ ) and PAs ( $n = 64$ ) align with APSHO membership (Table 2). Years in their current role and years in heme/onc indicate a split of very experienced APs and many who are new to the specialty. The majority (61.4%) have been in their current heme/onc role for 10 years or fewer, likely indicating prior roles in heme/onc, such as oncology nursing. Most APs practice in the OP setting (79.8%,  $n = 304$ ), with fewer practicing in the IP setting (5.5%,  $n = 21$ ) or combined OP/IP setting (14.7%,  $n = 56$ ). Most APs work in the community setting (60.4%,  $n = 230$ ), with fewer practicing in academic (35.4%,  $n = 135$ ) or other settings (4.2%,  $n = 16$ ).

Most APs in this survey (54.3%,  $n = 207$ ) work full time (1.0 clinical FTE [cFTE]), followed by those with a cFTE between 0.5 and 0.9 (35.7%,  $n = 136$ ), and < 0.5 (10%,  $n = 38$ ). Fifty-eight percent

of respondents report no administrative FTE or protected time (aFTE). Advanced practitioners reporting an aFTE ranged from < 0.5 (30%,  $n = 113$ ) or 0.5 to 0.9 (7.3%,  $n = 28$ ), and 16 APs indicated they had an aFTE of 1.0 (4.2%).

Advanced practitioners indicating an aFTE  $\geq 0.75$  ( $n = 24$ ) may have greater responsibility in AP leadership/management (Table 3). They include a mix of NPs ( $n = 21$ ) and PAs ( $n = 3$ ) working in both community settings ( $n = 11$ ), academic centers ( $n = 11$ ), or other ( $n = 2$ ) settings. Most AP leaders in this survey work in the OP setting ( $n = 21$ ), with fewer working in the IP ( $n = 3$ ) or combined OP/IP setting ( $n = 1$ ). Thirty percent of AP leaders have fewer than 10 years of heme/onc experience and fewer than 10 years in their leadership role. Thirty-five percent of AP leaders have more than 20 years of heme/onc experience, and 19% have more than 20 years of experience in leadership.

In this group of AP leaders, workload ( $r = -.54$ ,  $p < .001$ , 95% confidence interval [CI]) and values ( $r = -.43$ ,  $p = .3$ , 95% CI) as defined by the AWS were negatively correlated with emotional exhaustion (EE). The EE score for AP leaders indicates a similar risk of burnout to the general APSHO members participating in the survey (3.1 vs. 3.2). A greater sense of feeling valued was positively correlated with workload ( $r = .62$ ,  $p < .001$ , 95% CI), control ( $r = .45$ ,  $p < .001$ , 95% CI), community ( $r = .60$ ,  $p < .001$ , 95% CI), and fairness ( $r = .74$ ,  $p < .001$ , 95% CI). In this survey, workload ( $r = -.575$ ,  $p < .001$ , 95% CI), control ( $r = -.478$ ,  $p < .001$ , 95% CI), reward ( $r = -.457$ ,  $p < .001$ , 95% CI), and fairness ( $r = -.407$ ,  $p < .001$ , 95% CI) indicate a higher risk of emotional exhaustion and an increased risk of burnout (Table 3).

The most common work schedule template and visit volumes are presented in Table 2. Five eight-hour shifts per week remains the most common work schedule (53.3%,  $n = 203$ ). This is not surprising, considering most APs in this survey work in the community setting where office hours are generally more limited than large institutions who have the capacity to run large onsite infusion centers, have extended hours, and expanded days of the week. Advanced practitioners working 4 days a week are generally scheduled for 10 hours (28.1%,  $n = 107$ ); this schedule is most


**Table 2. APSHO Productivity, Burnout, and Work-Life Balance Survey: Nurse Practitioner/Physician Assistant Demographics (n = 381)**

Characteristic	No. (%)
AP role	
NP	317 (83)
PA	64 (17)
Age, y	
< 35	43 (11.3)
35-44	103 (27.0)
45-54	127 (33.3)
55-64	77 (20.2)
≥ 65	31 (8.2)
Years in hematology/oncology	
≤ 5 y	77 (20.2)
6-10 y	96 (25.2)
11-15 y	64 (16.8)
16-20 y	46 (12.1)
> 20 y	98 (25.7)
Years in current role	
≤ 5 y	134 (35.2)
6-10 y	100 (26.2)
11-15 y	71 (18.6)
16-20 y	38 (10.0)
> 20 y	38 (10.0)
Practice location	
Inpatient	21 (5.5)
Outpatient	304 (79.8)
Combined	56 (14.7)
Practice type	
Academic	135 (35.4)
Community	230 (60.4)
Other	16 (4.2)
Clinical FTE	
1.0	207 (54.3)
0.5-0.9	136 (35.7)
< 0.5	38 (10.0)
Administrative FTE (aFTE)	
1.0	16 (4.2)
0.5-0.9	28 (7.3)
< 0.5	113 (30.0)
No administrative time	223 (58.5)

**Table 2. APSHO Productivity, Burnout, and Work-Life Balance Survey: Nurse Practitioner/Physician Assistant Demographics (n = 381) (cont.)**

Characteristic	No. (%)
Days worked per week	
5	203 (53.3)
4	143 (37.5)
< 4	35 (3.2)
Hours scheduled per day	
> 10	5 (1.3)
10	107 (28.1)
8-9	258 (67.7)
< 8	11 (2.9)
Hours worked per day	
> 10	77 (19.9)
10	133 (34.9)
8-9	143 (37.5)
< 8	19 (7.7)
Hours worked at home/day	
WFH (8-12)	14 (3.7)
4-6	21 (5.5)
2-3	71 (21.4)
1.0-1.9	107 (28.1)
0.2-0.9	33 (8.4)
None	135 (35.4)
Visit model (NP/PA provider only)	
Shared	32 (8.4)
Independent	238 (62.5)
Blended	101 (26.5)
N/A	2 (0.5)
Visit template (excludes WFH)	
5-7	35 (9.1)
8-10	106 (27.8)
11-13	79 (20.8)
14-16 <sup>a</sup>	97 (25.4)
> 16 <sup>a</sup>	47 (13.0)

Note. NP = nurse practitioner; PA = physician assistant; FTE = full-time equivalent; WFH = work from home.  
<sup>a</sup>Majority shared templates

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**Table 2. APSHO Productivity, Burnout, and Work-Life Balance Survey: Nurse Practitioner/Physician Assistant Demographics (n = 381) (cont.)**

Characteristic	No. (%)
Return and new visits/day (excludes WFH)	
5-7	60 (12.7); 20 (5.2)
8-10	134 (35.2); 5 (1.6)
11-13	67 (17.6); 5 (1.6)
14-15 <sup>a</sup>	48 (12.6); 1 (0.3)
≥ 16 <sup>a</sup>	31 (8.3); 3 (0.9)
Do not see new patients	158 (41.5)

*Note.* NP = nurse practitioner; PA = physician assistant; FTE = full-time equivalent; WFH = work from home.  
<sup>a</sup>Majority shared templates

common in clinics with expanded hours. Most APs in this survey indicated they worked more hours than scheduled (68.7%,  $n = 262$ ), and many report taking work home to complete it (60%,  $n = 229$ ), which are important factors in considering workload, work-life balance, and burnout.

Among the APs reporting their template structure, independent templates were most common ( $n = 238$ , 62.5%), with fewer practicing in a shared visit ( $n = 32$ , 8.4%) or blended model ( $n = 101$ , 26.5%). This is consistent with the new Centers for Medicare & Medicaid Services billing guidelines proposed to go into effect in 2024 that advocate for independent templates and billing to increase access to care. The mean number of template slots/day for this group is 11.2, with the majority ( $n = 252$ , 68%) indicating templates with 8 to 13 slots, and fewer reporting  $< 8$  ( $n = 51$ , 14.1%), 14 to 15 (12.6%,  $n = 48$ ), or 16 or more (8.3%,  $n = 31$ ). The higher number of slots was most often associated with a shared or blended practice model and the lower number of slots was associated with lower cFTEs or higher aFTEs.

Estimates for the percentage time spent on direct or indirect care in this group confirm the amount of time spent on activities required to provide comprehensive cancer care and support the practice (Figure 1). Most of the time spent each day is spent in direct patient care (58.8%). Activities that may be partially tied to a visit but may also be performed outside the billable visit (14.8%) and nonbillable indirect care (26.4%) represent a significant portion of workload for

APs in this survey (Table 4). Collectively, these create a strain for APs where valuation is based solely on visit volume or work relative value units and frequently contribute to hours worked beyond those scheduled, which is known to increase burnout.

Advanced practitioners participating in this survey report emotional exhaustion a few times a month to once a week, feel overextended (37.4%), report burnout (17.8%), and perceive their workload to be too high. Most APs are salaried and do not get paid overtime. Therefore, time spent after hours completing unfinished documentation or other tasks negatively affects work-life balance and contributes to burnout (Kurtin et al., 2023b). Detailed results of the burnout and work-life balance component of this survey are described in the article by Kurtin and colleagues (2023b).

## DISCUSSION

Quantifying the full scope of billable and nonbillable services provided by heme/onc APs is essential to developing benchmarks and providing practices with guidance to develop templates and productivity expectations tailored to the AP level of experience, time in the practice, clinical setting, patient complexity, physician collaboration, and available support staff. While most of these factors are generally represented in developing templates and setting expectations, essential nonbillable services (26.4% or more of the workload described by this group of APs) are not well described or represented in current templates and productivity expectations. Depending on the practice site, APs may or may not have assigned support staff (nursing, medical assistants, clerical) or administrative support to assist in managing these nonbillable activities. Even with support, most of these activities require provider input or management. Several institutions have developed ways to internally track nonbillable activities in the EHR or other reporting systems. The value of tracking these nonbillable activities is imperative to capturing the full value of the AP and better quantifying “overhead” for running a practice.

Benchmarks for heme/onc AP productivity vary widely regionally, by practice type, and prac-

**Table 3. Burnout and Areas of Worklife Among APSHO Members ( $n = 366$ ) and APSHO Advanced Practitioner Leaders ( $n = 24$ ;  $aFTE \geq 0.75$ )**

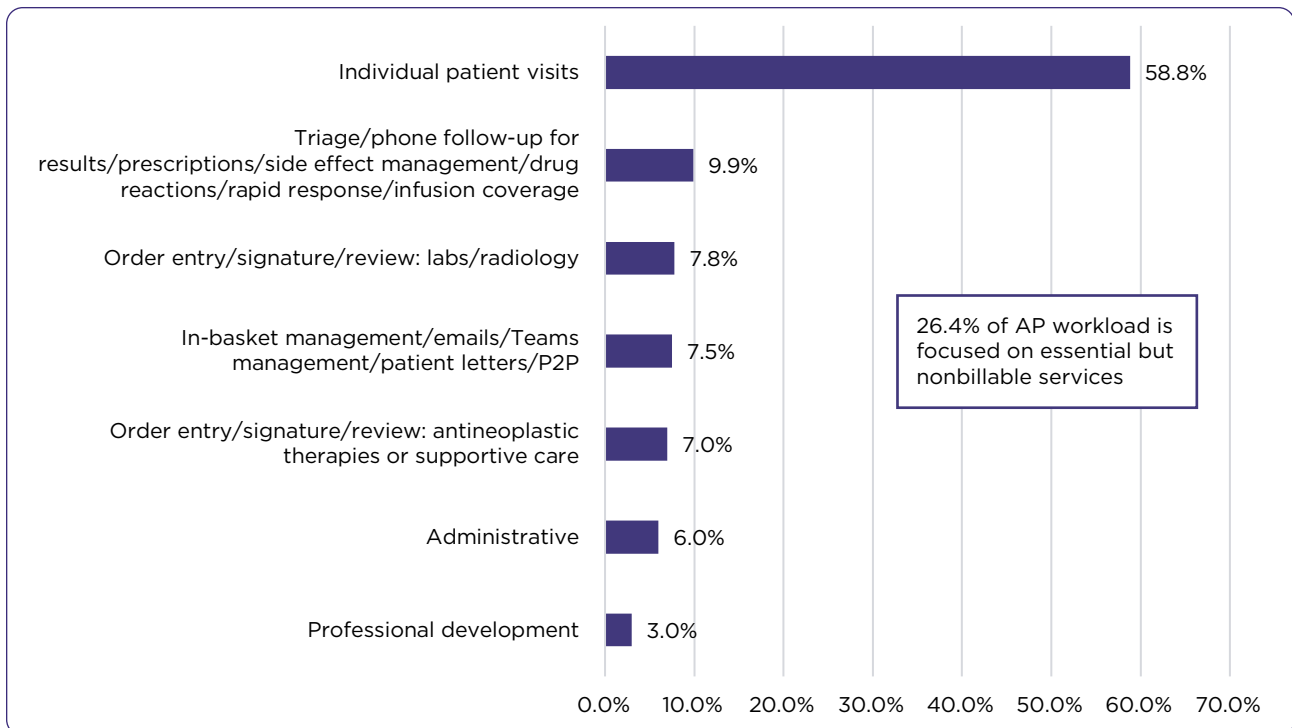
<b>Maslach Burnout Inventory (MBI) Scores</b>		
MBI component	Total score (0–6, with 0 = never, 6 = every day)	Higher scores for EE and DP and lower scores for PA are associated with burnout.
Emotional exhaustion (EE)	AP: 3.2 AP leader: 3.1	AP leaders are at a similar risk of burnout to non-leader APs.
Depersonalization (DP)	AP: 1.5 AP leader: 1.1	AP leaders indicate a lower sense of depersonalization than APSHO member APs.
Personal accomplishment (PA)	AP: 4.9 AP leader: 5.2	AP leaders report a high sense of accomplishment.
<b>Areas of Worklife Survey (AWS) Scores</b>		
AWS component	Total score (0–5, with 0 = strongly disagree, 5 = strongly agree)	Lower scores can contribute to burnout. A score $\leq 2$ (disagree) implies a higher risk of burnout.
Workload	AP: 2.5 AP leader: 2.4	Implies discordance with workload expectations. AP leaders have a slightly lower score implying a greater risk of burnout.
Control	AP: 3.3 AP leader: 3.5	Implies some ambivalence toward sense of control (unclear leadership structure or expectations, lack of input or autonomy, etc.) and vulnerability for burnout. AP leaders report a greater sense of control.
Reward	AP: 3.3 AP leader: 3.3	Implies some ambivalence toward reward (recognition for contributions, inequity in pay, job perks, titles, etc.) and vulnerability for burnout.
Community	AP: 3.6 AP leader: 3.7	Implies some ambivalence toward community (social environment, positive connection, workplace culture, collaboration, trust). AP leaders report slightly higher sense of community.
Fairness	AP: 2.9 AP leader: 3.0	Implies discordance with perceived fairness (consistent and equitable rules and actions). AP leaders are ambivalent about fairness.
Values	AP: 3.6 AP leader: 3.8	Implies some ambivalence toward values (personal vs. individual values). AP leaders report feeling more aligned with organizational values.

*Note.* Areas of Worklife Survey describes the alignment between employees and the organization.

tice location (OP, IP, OP/IP). Understanding each metric is essential to understanding the limitations when applying the metric to valuation of the heme/onc AP (Table 1).

Considering the high risk of burnout and attrition among new heme/onc APs, particular attention to a tailored ramp-up for visit volume and productivity expectations is essential to improve retention. There must be clarity in productivity expectations for new hires so they know exactly what is expected to meet their benchmarks at each point in their ramp-up process. The duration of the ramp-up is another standard that is not well defined and ideally would be tailored to the individual AP.

Business models that place undue emphasis on revenue that APs cannot directly impact (for example, overhead expenses such as purchasing of antineoplastics or net collections where the visit is incident-to) unfairly hold APs accountable and devalue their actual contribution and value to the practice. These metrics have inherent flaws, including creating an environment where being “busy” is the primary motivation, limiting the AP’s ability to take part in value-added but not lucrative visits such as survivorship and advance care planning, team meetings, or professional development opportunities. It can also create a culture of competitiveness



**Figure 1.** Percentage of advanced practitioner time spent on daily activities ( $n = 375$ ). 58.8% of time is spent on direct care (individual patient visits). 26.4% of time is spent on nonbillable activities (triage, phone follow-up for results, prescriptions, side-effect management, drug reactions, rapid response, infusion coverage; in-basket management, emails, Teams management, patient letters, P2P; administrative; and professional development). 14.8% is spent on order entry, results review, and follow-up that may or may not have been tied to a billed visit.

between physicians and APs that does not promote team cohesion.

We propose that AP productivity measurement include other metrics that reflect the AP's impact on the entire care team. Access to care (time to first appointment for new patients or visit for clinical trial) can be enhanced by shifting patients to the AP template to increase access to physician schedules. These "follow-up shift" visits can be tracked and attributed to the AP as access to care in addition to a billed visit. Increasing practice capacity and timely visits has far-reaching impacts on the practice, the patients, and the care team. Effective and flexible AP utilization can increase the ability to meet quality goals leading to shared savings, quality payments, and overall lower total cost of care.

Quality measures can be AP-led, add to the practice value overall, and can be another source of available metrics. Programs like pain management, advance care planning, emergency department (ED)/hospital avoidance, and hospice use all fall

within the standard AP role. Maintaining a capacity to see same-day patients to avoid ED or urgent care requires open slots on AP templates. Revenue generated from infusion services with AP oversight may provide a source for funding nonbillable AP services required to safely manage the infusion suite. Practices are also collecting patient satisfaction data with APs included as providers; these metrics should also be included as a value-added metric.

### Heme/Onc AP Leaders

Effective AP leaders are a cornerstone to creating meaningful metrics that reflect the true scope of work for their team. The scope of services provided to the practice by AP leaders is broad (Table 5). A well-defined AP leadership structure is necessary to optimize AP scope and deliver high-quality, efficient, and contemporary cancer care. Advanced practitioner leadership structures are a relatively new concept in American health-care systems, but the value of APs reporting directly to an AP cannot be overstated (Proulx, 2021).



**Table 4. Nonbillable Services Provided by Hematology and Oncology Advanced Practitioners Providing Direct Patient Care**

Service category	Nonbillable services provided
Coordination of care	<ul style="list-style-type: none"> <li>• Communication with outside providers, discharge planning conferences</li> <li>• Care transition communication</li> <li>• Patient triage with team outside of visit</li> </ul>
Order entry, signature, review	<ul style="list-style-type: none"> <li>• Antineoplastic therapy orders written and signed</li> <li>• Antineoplastic therapy orders reviewed and signed</li> <li>• Clinical trial treatment orders written and signed</li> <li>• Clinical trial treatment orders reviewed and signed</li> <li>• Supportive care orders written and signed</li> <li>• Supportive care orders reviewed and signed</li> <li>• Lab or radiology orders placed and signed</li> <li>• Lab or radiology orders reviewed and signed</li> <li>• Consult or referral orders entered and signed</li> <li>• Follow-up on results of orders and/or consults</li> </ul>
Prescriptions	<ul style="list-style-type: none"> <li>• Prescriptions, new or refills</li> <li>• Prescription for controlled substances (review of PMP, pain contract, etc.)</li> </ul>
EHR in-basket, patient portal messages, email, Teams	<ul style="list-style-type: none"> <li>• Institutional or practice messages for compliance, alerts, general team communication</li> <li>• In-clinic communications for workflow alerts, patient inquiries, disease team messaging for patient management, etc.</li> <li>• Lab results reviewed, acknowledged, follow-up</li> <li>• Radiology results reviewed, acknowledged, follow-up</li> </ul>
Practice management: disease team support	<ul style="list-style-type: none"> <li>• Rapid response/code/emergency team</li> <li>• Infusion suite patient management (e.g., drug reactions)</li> <li>• Peer-to-peer calls for insurance appeals</li> <li>• Patient letters, forms</li> <li>• REMS training for specialty drugs</li> <li>• Section/disease team meetings</li> <li>• Tumor board</li> <li>• Clinical trials meetings</li> </ul>
Professional development/ Compliance	<ul style="list-style-type: none"> <li>• Mandatory education</li> <li>• External: continuing education</li> <li>• Publications, presentation, society committees/boards, etc.</li> <li>• Professional networking/mentoring</li> </ul>

Note. PMP = Prescription Monitoring Program; REMS = Risk Evaluation and Mitigation Strategy.

To support an agile, productive, and sustainable AP workforce, it is important to create strategic structures and plans that place APs in positions of influence, encourage knowledge sharing, promote opportunities for professional development, and engage APs in the creation of a shared culture through which norms and values can be demonstrated to new hires through onboarding.

Organizations that have implemented AP leadership structures have seen increased employee engagement and decreased rates of turnover, from 11% to 15% to 5% to 7% annually post-implementation (Martin, 2020). The direct cost per AP leaving the practice is estimated to be \$85,000 to \$114,000 (Hartsell & Noecker, 2020). When you add indirect costs and consider years of experience, these

estimates can climb as high as \$212,000 to \$300,000 or higher (2.5 × salary).

Advanced practitioner leaders need to be fluent in practice standards, legal requirements for practice, physician collaboration, institutional hierarchy, escalation protocols, strategic goals, and the financial stability of the practice. The ability to articulate AP practice in language that is clear and understandable to administrators, physicians, the C-suite, and other stakeholders will facilitate recognition of the AP teams' contribution to the practice. Familiarity with the metrics currently used in the practice or institution and an awareness of the evolving data that reflect productivity nationally is essential to advocate for changes such as additional programs, initiatives, clinics,

**Table 5. Services Provided by Hematology and Oncology Advanced Practitioner Leaders**

Service category	Functions
Recruitment	<ul style="list-style-type: none"> <li>• Submit requisitions/SBAR for new or replacement positions</li> <li>• Collaborate with the recruitment team for open positions</li> <li>• Screen applicants, verify licensure (AP, DEA, state certification) and references, etc.</li> <li>• Interview candidates personally, then coordinate interviews with key stakeholders</li> <li>• Recommend candidates for hire, negotiate offer, welcome new hire</li> </ul>
Onboarding	<ul style="list-style-type: none"> <li>• Coordinate credentialing</li> <li>• Coordinate mandatory orientation, badge/access, computer training, e-prescribe, telehealth platform, etc.</li> <li>• Develop onboarding schedule tailored to the new hire</li> <li>• Request build for template with ramp-up planning for slots</li> <li>• Set clear expectations for productivity, including details of ramp-up schedule</li> <li>• Hold weekly debrief during first 8 weeks of onboarding, then tailored to the new hire</li> <li>• Perform quarterly reviews to gauge progress and adapt onboarding plan</li> </ul>
Team management communication, service line meetings	<ul style="list-style-type: none"> <li>• Schedule APs to cover service line</li> <li>• Create a backup plan for coverage to maintain access to care</li> <li>• Provide clinical practice guidance</li> <li>• Attend/participate in operations, service line, and ad hoc meetings</li> <li>• Participate in yearly budget and productivity projections for the service line</li> <li>• Crisis management</li> <li>• Service recovery</li> <li>• Oversee and facilitate quality improvement projects</li> <li>• Oversee regulatory, mandatory, and licensure requirements</li> <li>• Represent the AP team at key service line and corporate meetings</li> <li>• Maintain a networking structure to improve leadership skills</li> <li>• Advocate for the team</li> <li>• Facilitate AP practice at top of license</li> <li>• May serve concurrently in a clinical role</li> </ul>
Mid-year evaluation and annual review	<ul style="list-style-type: none"> <li>• Maintain AP team member files and coordinate peer evaluations, physician feedback, and team member feedback</li> <li>• Check in regularly throughout the year so that there are no surprises at the time of review</li> <li>• Facilitate career development</li> <li>• Complete mid-year review and annual review via electronic process</li> <li>• Initiate counseling or corrective action when necessary</li> </ul>
Cultivate career development and well-being across team	<ul style="list-style-type: none"> <li>• Provide or facilitate continuing education</li> <li>• Seek support for team retreats, team building, etc.</li> <li>• Encourage/facilitate networking outside practice</li> <li>• Referral, encouragement for well-being, mental health, counseling resources within practice/institution</li> </ul>
Personal growth and succession planning	<ul style="list-style-type: none"> <li>• Set yearly goals for growth and celebrate successes</li> <li>• Cultivate leadership qualities in team</li> <li>• Maintain network of AP Leaders</li> <li>• Engage in professional organizations/societies</li> <li>• Participate in institutional leadership training</li> </ul>
<p><i>Note.</i> SBAR = Situation, Background, Assessment, and Recommendation; AP = advanced practitioner; DEA = Drug Enforcement Administration.</p>	

and positions. Leaders should partner with their teams to discuss and pilot ideal metrics prior to utilization by upper or executive leadership.

Retention of APs is critical to maintaining a stable and agile AP workforce. Retention strategies require dedicated time by the AP leader to effectively engage with the AP team to improve a sense of community, oversee the onboarding processes, and provide mentoring and coaching.

Advanced practitioner leaders are charged with cultivating an AP workforce with variability in experience, generational diversity, and commitment to the team and practice. Unfortunately, there are no benchmarks for the number of AP direct reports per AP leader. Administrative support for AP leaders is often lacking. Instead, AP leaders often take on clerical tasks that could be delegated to an administrative assistant.

To be effective, AP leaders must maintain a presence in operations meetings, work groups, and task forces to ensure the AP voice is heard and the AP team stays apprised of changes and initiatives in the service line and the institution. For those APs who also carry a clinical load, this process becomes extremely difficult. Larger institutions with AP structures that have an AP chief or director, associate chief or associate director, AP leads or associate leads, and AP managers, each with the number of direct reports defined by the level of leadership, have been successful (Proulx, 2021). Creating a metric to calculate a reasonable number of direct reports will be important to retain AP leaders who are vulnerable to burnout.

Given the prevalence of burnout and emotional exhaustion, significance of reward, and value among the APSHO members participating in the Productivity, Burnout, and Work-Life Balance Survey, supporting flexible work schedules and allocating for nonbillable functions through adjusted clinical full-time equivalents and protected time to allow completion of these tasks within the workday will be necessary to reduce burnout and improve work-life balance. Standardized benchmarks and metrics for heme/onc APs can provide organizations with data to support new AP positions and other resources needed to maintain quality care for cancer patients, while also promoting job satisfaction, decreasing burnout, and improving retention. Expanding dedicated heme/onc training through fellowships or tailored onboarding processes will be critical to grow the next generation of heme/onc APs. The true value of the AP to the practice and the broader AP profession cannot be captured by current physician-based benchmarks and metrics that do not adequately reflect the scope and complexity of the AP role. Continued analysis of the broader AP roles across academic organizations and clinical practices will be necessary to sustain the AP workforce. ●

### Disclosure

The authors have no conflicts of interest to disclose.

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