

APP CROSS: A Novel Scoring System to Evaluate Advanced Practice Provider Clinical Rotation Requests in Oncology

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Abstract

With the rapid growth of nurse practitioner (NP) and physician assistant (PA) programs nationwide, health systems face increasing demands for clinical rotations, particularly in specialized areas such as oncology. Baptist MD Anderson Cancer Center developed a standardized scoring system, the Advanced Practice Provider Clinical Rotation in Oncology Scoring System (APP CROSS), to address this challenge. This feasibility study assesses the implementation, practicality, and effectiveness of the APP CROSS in streamlining the evaluation and selection of APP clinical rotation candidates. The scoring system was designed to align with strategic health-system goals, such as stabilizing the workforce, community engagement, and enhancing quality care, using criteria that include system employment, prior rotations, oncology experience, personal statement quality, proximity to graduation, and preferred school enrollment. Scoring criteria include employment within the health system, previous rotations, oncology experience, quality of personal statements, proximity to graduation, and enrollment in preferred schools. While initially tailored for oncology, the tool's principles are generalizable. Early data suggest the APP CROSS promotes objective student selection, enhancing recruitment and retention potential. Future studies are warranted to assess long-term outcomes related to APP retention and preceptor satisfaction.

The rapid expansion of nurse practitioner (NP) and physician assistant (PA) programs in recent years has heightened the demand for clinical rotation sites, particularly in highly specialized areas such as oncology. In 2021 alone, over 47,000 NP and PA students completed their training, contributing to the growing pool of advanced practice providers (APPs) entering the health-care workforce (AACN, 2022; Hooker & Cawley, 2021). However, the rate of growth of educational programs has outpaced

the availability of qualified preceptors willing and able to guide students through their critical clinical rotations. This imbalance creates a challenge for health systems seeking to cultivate well-prepared APPs while ensuring preceptor support, retention, and quality patient care.

In oncology, the need for robust APP training is especially pronounced. The American Society of Clinical Oncology (ASCO) published data in 2007 and again in 2014 citing anticipated shortages of medical and radiation oncologists, with the estimates ranging from 2,258 to 2,393 full-time equivalents short by 2025 (Yang et al., 2014). A 2018 study estimated there are anywhere from 5,350 to 7,000 APPs working in oncology across the United States (Bruinooge et al., 2018), underscoring the role of APPs as essential members of the oncology care team. Despite the increasing reliance on APPs, oncology often receives limited coverage during standard didactic education, making clinical rotations vital for exposing students to the complexities of cancer care. To address this need, Baptist MD Anderson Cancer Center established the role of an APP Clinical Education Coordinator. One of the full-time practicing surgical oncology APPs was appointed to this role in recognition of her interest in clinical education and existing involvement in student placement within the cancer center. This voluntary role was added to her clinical responsibilities to address a growing organizational need and support the development of future APPs.

During the development of this role, it became evident that there was an absence of standardized procedures for requesting, evaluating, and selecting APP students and preceptors for clinical rotations within the oncology service lines. Additionally, it was noted that the number of student requests often exceeded the availability of APP preceptors. Centralizing these functions was identified as a solution to reduce the burden on individual preceptors, who were frequently approached by numerous students each semester, and to establish a consistent, organized approach to managing rotation requests. To streamline the selection process, the Advanced Practice Provider Clinical Rotation in Oncology Scoring System (APP CROSS) was created—a structured and systematic rubric designed to objectively evaluate rotation requests.

DEVELOPMENT OF THE APP CROSS

The methodological approach to developing the APP CROSS scoring rubric presented in Table 1 involved aligning the criteria with the strategic goals of the health system and incorporating input from key stakeholders in APP clinical education (Gaynor & Barnes, 2022; Minor et al., 2019). The primary health-system goals that guided this development were stabilizing the workforce, serving the community, and focusing on quality and service excellence.

Stabilizing the Workforce

Advanced practice provider clinical rotations present valuable opportunities for recruiting APPs into the health system. Identifying the best students and providing meaningful clinical experiences can enhance the likelihood of subsequent employment and retention. Proximity to graduation was identified as a key factor in recruitment potential. Current employees are prioritized, as their familiarity with the organization's culture and values offers a potential advantage. The training model for PA students requires a full-time commitment throughout both the didactic and clinical phases of their education. During clinical rotations, students are expected to complete an average of 40 hours per week in hands-on clinical training. To maintain equity, PA students, who typically cannot work during their training programs, are automatically awarded points in this category.

Serving the Community

Priority is given to students enrolled in local preferred schools, fostering relationships with community institutions and supporting local workforce development. This strategy has been shown to strengthen community ties and improve recruitment of high-quality candidates from nearby programs.

Focusing on Quality and Service Excellence

Receiving a positive review from a prior rotation within the health system demonstrates alignment with institutional values and proven capability to contribute effectively within clinical teams. Conversely, negative reviews are considered on a case-by-case basis to ensure fairness and an individualized approach.

Table 1. Advanced Practice Provider Clinical Rotation in Oncology Scoring System (APP CROSS)

Criteria	Points	Explanation
Currently a health system employee	2	Indicates familiarity with the organization and its values. <i>For PA rotation requests, 2 points automatically given as PAs do not typically work during their program</i>
Previous rotation with health system with a positive review	3	Demonstrates a proven track record and fit within the health-care system and clinical team. <i>We generally exclude candidates who receive negative reviews from prior preceptors within the health system</i>
Experience in oncology (employment or rotations)	3	Shows sustained interest and experience in oncology, which is beneficial for both the student and BMDA.
Quality of personal statement	1-5	Scored based on a rubric to assess interest, goals, alignment with health system values, and relevant skills.
Scoring rubric: <ul style="list-style-type: none"> • 5 points: Exceptional personal statement with a compelling narrative, a clear passion for oncology, detailed relevant experience, and strong alignment with health system's mission and values, with a well-articulated plan to continue in oncology. • 4 points: Strong interest in oncology, specific experiences or skills relevant to oncology, and good alignment with health system's mission and values. • 3 points: Clear interest in oncology, some relevant experience or understanding of the field, but limited alignment with health system's values or mission. • 2 points: Some expression of interest, limited understanding of oncology or APP roles; vague career goals. • 1 point: Minimal or generic interest in oncology, no clear understanding of the role of APPs in oncology or health system's mission. 		
Proximity to graduation	1-3	Prioritize those close to graduation for a recruitment opportunity.
Scoring rubric: <ul style="list-style-type: none"> • 3 points: One semester remaining • 2 points: Two semesters remaining • 1 point: More than two semesters remaining 		
Enrollment in preferred school	1-3	Prioritize local preferred schools who continuously collaborate with the health system. Also allow other schools to gain points based on positive experience and feedback from previous students/preceptors.
Scoring rubric: <ul style="list-style-type: none"> • 3 points: Preferred local school • 2 points: Previous APP rotations provided positive student/preceptor feedback • 1 point: No previous APP rotations from school or limited positive experiences shared 		
GPA	NA	While important, GPA should be weighted lower compared to practical experience and demonstrated interest. This is used as a tie breaker instead of a definite component of the scoring system.
Point range: The total score for each applicant can range from a minimum of 6 to a maximum of 19 points.		
<i>Note.</i> PA = physician assistant; APP = advanced practice provider; GPA = grade point average.		

SCORING CRITERIA

The APP CROSS rubric incorporates a range of criteria to ensure holistic and fair evaluation of rotation requests.

Health system employment status (2 points): Preference is given to current employees familiar with organizational values, with automatic points awarded to PA students due to training program constraints.

Prior rotations within the health system (3 points): Candidates with positive reviews from

prior rotations demonstrate a strong fit and proven competency, while negative reviews are individually evaluated.

Oncology experience (3 points): Relevant experience, whether through rotations or employment, indicates a commitment to the specialty.

Quality of personal statement (1-5 points): Personal statements are scored on a Likert scale, providing insight into the applicant's goals, passion for oncology, and alignment with the system's values.

Proximity to graduation (1–3 points): Prioritizing students close to graduation maximizes immediate recruitment opportunities.

Enrollment in preferred schools (1–3 points): Strengthening ties with local educational institutions reflects a commitment to community engagement and fosters high-quality applicant selection.

GPA (used as a tiebreaker): While considered important, GPA serves as a tiebreaker, emphasizing practical experience and demonstrated interest over pure academic performance.

FEASIBILITY, IMPLEMENTATION, AND PRELIMINARY FINDINGS

This feasibility study examines the implementation and utility of the APP CROSS tool in streamlining the evaluation and selection of APP student rotation requests. The primary objectives are to assess the practicality, scalability, and potential impact of this scoring system in improving student recruitment, optimizing preceptor utilization, and aligning with the institution's strategic goals. By offering an objective and transparent evaluation process, the APP CROSS aims to enhance recruitment efforts, support preceptor resources, and ultimately contribute to workforce stabilization and service excellence within the field of oncology. This study further explores the initial outcomes and challenges associated with implementing the system, providing insights for future iterations and broader application within other specialties.

The APP CROSS was used across two consecutive semesters and allowed for consistent and efficient evaluation of rotation requests, reducing the burden on individual preceptors and ensuring centralized decision-making. Scores range from 6 to 19 points, with feedback from preceptors and applicants used to refine the tool. Preliminary application data, with an average score of 11.5 points (range 7–19, median 9), suggests effective, objective candidate selection. Future research will explore long-term impacts on recruitment, retention, and preceptor satisfaction.

Subjectively, collaborating local institutions reported that the systematized process was beneficial to their programs as well. Program directors and clinical education coordinators expressed appreciation for the centralized application and

structured approach, which enhanced their efficiency in securing clinical rotations for students. The establishment of a single point of contact, the APP Clinical Education Coordinator, streamlined communication and eliminated the need to reach out to individual practitioners, thereby strengthening the relationship between academic programs and the organization.

IMPLICATIONS FOR PRACTICE

By creating a standardized and objective evaluation system, the APP CROSS strengthens the training pipeline, optimizes the selection of APP students, and enhances recruitment efforts. This tool offers an APP student selection process and will aid in preceptor resource management. It also can be easily adapted to other specialties facing similar challenges. One potential limitation of this system is the emphasis it places on existing connections to the specialty, which may unintentionally limit exposure to oncology for APP students who are still exploring their clinical interests. As a result, students without a preexisting connection to oncology may miss the chance to gain exposure to the field, potentially narrowing their understanding of oncology practice and limiting future interest in this specialty. Further research is needed to evaluate its broader applicability and impact on workforce stabilization and service excellence. ●

Disclosure

The authors have no conflicts of interest to disclose.

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