

# Physician Assistant Perspective on the ASCO Workforce Study Regarding the Use of Physician Assistants and Nurse Practitioners

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## Abstract

**Purpose:** A workforce study by the Association of American Medical Colleges (AAMC) predicted a shortage of 2,350 to 3,800 oncologists, or 9.5 to 15 million visits, by 2020. Proposed solutions included use of physician assistants (PAs) and nurse practitioners (NPs). Although 56% of the oncologists reported working with PAs/NPs, the AAMC did not survey PAs or NPs. This article uses additional data to examine the role of PAs/NPs in the oncology workforce.

**Materials and Methods:** American Academy of Physician Assistant (AAPA) census data and a study of PAs in oncology were used to examine these workforce issues.

**Results:** The AAMC reported oncologists working with PAs/NPs had increased productivity compared with physicians who did not, primarily when the PAs/NPs performed advanced roles or worked in private practice. Visits handled by PAs/NPs themselves were not reported. According to the AAPA, PAs in the

outpatient setting saw an average of 62.4 patients per week (inpatient PAs saw 62.2 patients per week), supporting the AAMC report that 70% to 92% of oncologists experienced increased efficiency with PAs/NPs. Whereas the AAMC reported that 46.4% of oncologists used PAs/NPs in advanced roles, Ross et al reported that more than 70% of PAs wrote chemotherapy orders (most requiring physician co-signature); more than 80% wrote prescriptions, including for controlled substances; and more than half performed invasive procedures. The AAMC reported that 13% of PAs/NPs performed research activities, and the AAPA reported that 60.5% of medical oncology PAs participated in clinical trials.

**Conclusion:** The AAMC workforce study inadequately examined the role of PAs/NPs in oncology. Given the available data in PA literature, the contribution of PAs/NPs to the workforce was substantially underestimated. In examining workforce issues, understanding opportunities for increasing collaborative practice requires the input of PAs/NPs.

## Introduction

A recently published workforce study conducted by the Association of American Medical Colleges (AAMC), commissioned by ASCO, examined the expected supply and demand for oncology services through 2020.<sup>1,2</sup> The survey estimated an increase in the number of oncologists over the next several years, with more physicians entering oncology specialties than the number of those retiring. This additional labor force is expected to increase the visit capacity by 14%. However, even if there are no changes in cancer incidence or utilization patterns between now and 2020, demand for oncology services will increase by 48%. A shortage of 2,350 to 3,800 oncologists, or 9.5 to 15 million visits, is predicted. The authors suggested a variety of possible solutions, including the increased use of physician assistants (PAs) and nurse practitioners (NPs). The workforce study did not survey oncology PAs or NPs, even though 56% of the oncologists reported working with PAs/NPs. The survey did not separately consider issues of PA and NP use.

## Materials and Methods

The American Academy of Physician Assistants (AAPA) estimated that 79,980 PAs were eligible for clinical practice in 2008.<sup>3</sup> The 2008 AAPA census identified 669 PAs (2.4% of the 27,568 PAs responding) who reported practicing in oncology disciplines, including 433 (1.7%) in medical oncology, 46 (0.2%) in hematology/oncology, 38 (0.1%) in

pediatric oncology or pediatric hematology/oncology, 76 (0.3%) in surgical oncology, and 76 (0.3%) in radiation oncology. At the time of the workforce study,<sup>1,2</sup> it was estimated that 1.9% of PAs responding to the 2005 annual AAPA census indicated a position in oncology.<sup>4</sup> This suggests increasing use of PAs in oncology.

The workforce study<sup>1,2</sup> referenced the American Academy of Nurse Practitioners 2004 workforce data, indicating that of the estimated 126,284 NPs in clinical practice, 1% were practicing in oncology; thus, there were approximately 1,263 NPs in oncology in 2004. Analysis of the 2005 AAPA census data suggests that an estimated 957 PAs worked in medical or pediatric oncology in 2005.<sup>4</sup> Thus, during the period of time in which the workforce survey was conducted, approximately 2,220 PAs/NPs worked in oncology. Of the estimated 10,422 total oncologists responding to the survey, 54% reported working with PAs/NPs, which would mean approximately 5,627 physicians working with the 2,220 PAs/NPs (a ratio of one PA or NP to 2.5 oncologists). This ratio may be explained by PAs/NPs providing services such as acute care, long-term follow-up, and inpatient care in the setting of a group oncology practice involving multiple physicians, or it could be a result of PAs/NPs working with different physicians on different days, a frequent occurrence in academic health centers, where oncologists reported spending only 53.8% of their time providing patient care, compared with the 90% reported by private practice oncologists.

## Results

### Productivity

The workforce study<sup>1,2</sup> found that oncologists who worked with PAs/NPs had increased productivity compared with those who did not. Researchers asked oncologists about the number of clinic visits performed in 1 week. They also asked about the type of services provided by PAs/NPs, including routine follow-up, acute care, and symptom management visits. Advanced services, defined as ordering routine chemotherapy, assisting with new patient consults, and performing invasive procedures, were also reported. Physicians used PAs/NPs in advanced (26%) and traditional (30%) roles. The survey found that academic oncologists who did not use PAs reported weekly visit rates of 51; for those who used them in traditional roles, 52; and for those who used them in advanced roles, 58. This number was significantly higher for private practice oncologists, but it also varied according to use of PAs/NPs, with 99, 102, and 109 visits reported, respectively. The authors concluded that there was no identified increase in the number of visits for those who worked in academic settings and used PAs in traditional roles, but for all others, the addition of PAs/NPs increased visit rates. However, no data were collected regarding visits performed by PAs/NPs alone; presumably, these visits would not have been reported in the survey as oncologist visits.

There are limited data available regarding PA clinical activity in almost all medical disciplines, and oncology is no exception. According to the 2007 AAPA census data on PAs working exclusively in the outpatient setting, those in pediatric oncology saw a mean of 25 patients per week, whereas those in medical oncology saw 62.4 patients per week.<sup>5</sup> For PAs working exclusively in the inpatient setting, the mean number of patient encounters was 58 for those in pediatric oncology and 62.2 for those in medical oncology. Ross et al<sup>6</sup> identified 300 PAs in clinical oncology and reported that a majority performed basic and advanced clinical duties, such as handling new and returning patient clinic encounters, writing chemotherapy orders, writing prescriptions (including for controlled drugs), performing invasive procedures like bone marrow biopsies, and participating in clinical research.

Data from the workforce study<sup>1,2</sup> indicated that most oncologists employing PAs/NPs reported increased efficiency (70% to 92%), allowing more time to be spent on complex cases (73% to 87%) and resulting in improvement in overall patient care (69% to 88%; the higher percentages reflect PAs/NPs performing advanced roles). Focusing on the small increase in productivity observed in weekly patient encounter rates may result in significant underestimation of the impact of adding PAs/NPs to an oncology practice. In fact, it may be more important to note that the number of patient visits did not decrease, given the role of oncologists in providing supervision for PA/NP patient encounters (resulting in an increased combined effort) and the fact that they reported having more time for complex cases when working with PAs/NPs. Given the productivity seen when PAs/NPs provided direct patient care, the

workforce study substantially underestimated the impact and contribution of PAs/NPs.

### PA/NP Responsibilities

The workforce study<sup>1,2</sup> categorized PA/NP duties as traditional (managing patients during visits, managing symptoms, and providing patient education) and advanced (assisting with new patient consults, ordering routine chemotherapy, and performing invasive procedures). Slightly more oncologists reported PAs/NPs functioning at the traditional rather than advanced level (30% versus 26%). AAPA census data provide a more complete view of typical PA clinical performance. For example, the 2007 AAPA census data indicated that many PAs performed minor surgical procedures, including 73.9% of pediatric oncology PAs and 28.1% of medical oncology PAs,<sup>5</sup> considerably higher proportions than the 19% reported by oncologists in the workforce study. The survey by Ross et al<sup>6</sup> of oncology PAs showed that more than 70% of PAs wrote chemotherapy orders (the majority reported that physician co-signature was required); more than 80% of respondents wrote medication orders and prescriptions, including for controlled substances; and more than half performed invasive procedures. The difference in these data compared with those of the ASCO workforce survey is likely explained by the direct acquisition of specific information gained from currently practicing PAs, although a rapid change in the use of PAs in the past 3 years in response to changing practice requirements is also possible.

### Academic Activities

Of the oncologists responding to the workforce study,<sup>1,2</sup> 31% to 58% reported that PAs/NPs allowed them to more easily participate in clinical research. Physicians also reported that only 13% of PAs/NPs performed research activities. Interestingly, the 2008 AAPA census reported that 60.5% of medical oncology PAs participated in clinical trials.<sup>3</sup> This discrepancy may be explained by PAs responding affirmatively to conducting research activities, which oncologists may not have considered performing research. It is also possible that there may have been a discrepancy between PAs and NPs (the workforce study did not distinguish between the two).

### Discussion

We suggest that the workforce study<sup>1,2</sup> significantly underestimated the contribution of PAs practicing in oncology. Given the observations by oncologists that PAs/NPs increased efficiency, improved patient care, allowed them more opportunity to spend time on complex cases and to conduct research, and led to an overall improvement in professional satisfaction, it is clear that PAs/NPs play an important role in the delivery of cancer care.

One recommendation of the workforce study<sup>1,2</sup> was to increase use of PAs/NPs to 85% in traditional or advanced capacity. To effectively transition PAs/NPs to such roles, more information is needed to determine which activities are essential for various oncology practices. Educational and training oppor-

tunities should be developed to this end. Attention must be paid to the unique regulatory nature of PA and NP practice; laws regarding supervision and scope of practice vary from state to state.

In addition to enhancing the roles of those PAs/NPs already in oncology, it is essential to expand the PA/NP workforce. Unfortunately, at a time when this need exists, other medical specialties are facing similar shortages of health care providers.<sup>7</sup> Therefore, a national effort is needed to address overall shortages of these health care providers and to attract them to the field of oncology.

### Future Directions

Understanding the opportunities for increasing collaborative practice requires the contribution of PAs/NPs in examining workforce issues. Additional research is needed to better define the clinical role of PAs. Expanding traditional educational opportunities is an essential component of expanding the use of PAs in the field. This includes increased funding of PA programs and expanded opportunities for elective oncology rotations among PA students. The addition of more clinical preceptors would afford additional opportunities for PAs to consider careers in oncology and provides a framework for non-

oncology PAs to provide care for oncology patients. Other areas of critical need include the development of educational programs for currently practicing PAs/NPs in an effort to facilitate the expansion of their clinical responsibilities in assuming advanced roles as well as the development of educational opportunities for oncologists regarding how best to use, supervise, and train PAs. We believe an inclusive, multidisciplinary, collaborative approach to addressing workforce shortage issues is the most effective way our professional organizations can continue to support the delivery of quality patient care services to oncology patients.

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#### Authors' Disclosures of Potential Conflicts of Interest

*The authors indicated no potential conflicts of interest.*

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