

# The Effects of Resident Work Hour Restrictions on Physician Assistant Hospital Utilization

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The limitation placed by the Accreditation Commission on Graduate Medical Education on physician resident work hours in 2004 resulted in various strategies on the part of graduate medical education (GME) programs to adjust to the loss of this traditional source of hospital labor. One approach has been the use of physician assistants (PAs) as hospitalists and inpatient providers. Employment of PAs in inpatient hospital settings increased from 2000 to 2006, perhaps partly as a result of resident work hour restrictions. This medical workforce shift requires further documentation and evaluation.

## INTRODUCTION

Utilization of PAs on hospital inpatient staffs is a labor substituting strategy that addresses a number of issues in modern graduate medical education (GME). PAs are not only capable of fulfilling a substantial portion of the clinical duties required on inpatient services,<sup>1</sup> they also offer the additional benefits of patient care continuity and facilitation of medical education goals for physician residents.<sup>2</sup> There has been speculation that the use of PAs on inpatient teaching services may be increasing due to the Accreditation Commission on Graduate Medical Education (ACGME)-imposed limitation on physician resident work hours. The resident work hour limitation, which became effective on July 1, 2004, has led ACGME-accredited programs to consider alternative staffing arrangements. One theory is that the combined effects of the US hospitalist movement and adjustments of residency training programs to the ACGME regulations have increased utilization of PAs in hospital settings and in resident-substitute roles. We sought to address the ques-

tion: Is there a trend to using PAs in academic medical centers?

## METHODS

Two data sources were sought. The first was literature documenting the experience of GME programs in academic centers in accommodating the new work week regulations. A search of the literature was performed using the search terms “GME,” “physician assistants,” “resident substitutes,” and “nurse practitioners.”

The second source was the American Academy of Physician Assistants’ (AAPA) annual Physician Assistant Census, which includes data on hospital-based employment settings. Data spanning 2000 through 2006 in the hospital-based employment settings of critical care, inpatient units, and operation room were examined. Census data relating to emergency department and outpatient settings were excluded.

## RESULTS

Several papers were found that described the incorporation of PAs into a residency program as an adjustment to the resident work hour

### Feature Editor’s Note:

Cawley and Hooker examine data from the AAPA annual PA Census to show that utilization of PAs in hospitals has been increasing in recent years, perhaps in response to the recent changes in ACGME rules on physician resident work hours.

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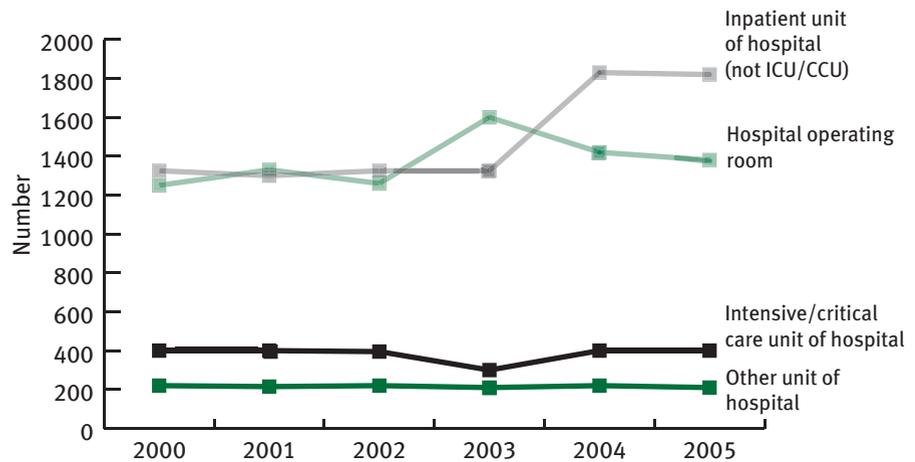
limitation. One experience, in an academic health center, described PAs utilized as resident substitutes in a pediatric intensive care unit setting over a 5-year period. While this paper predated the work hour limits it is illustrative of this labor shift.<sup>3</sup> A second paper described the transfer of duties from residents to PAs in the hospital emergency department setting.<sup>4</sup>

Another report described the benefits of PA utilization on inpatient services. These benefits included allowing in-house coverage of patients, protecting the educational integrity of the physician residency programs, allowing time for residents' conferences and clinics, and preparing residents for practice on multidisciplinary teams.<sup>5</sup> A fourth experience that directly pertained to the utilization of nurse practitioners (NPs) in residency programs addressing staffing changes due to the ACGME regulation was also positive.<sup>6</sup> One paper noted the negative effects of the new ACGME rules on medical student learning experiences but made no mention of PA utilization.<sup>7</sup> Finally, a report of experiences from several academic health centers mentioned a major trend of the offloading of resident work to faculty but made little mention of PA utilization.<sup>8</sup>

AAPA census data reveal that during the period between 2000 and 2006, the numbers of PAs in inpatient settings rose from 1,322 to 1,848. At the same time, the number of PAs in critical care units remained stable (403 to 405), and the number of PAs working in hospital operating rooms fell from 1,350 to 1,274 (see Figure). During this period the absolute number of all clinically active PAs increased.

Specifically, the data show that from 2003 to 2006 the percentage of PAs working in critical care units

Figure. Number of PAs in Select Hospital Settings by Year



Source: American Academy of Physician Assistants Annual Census, 2003-2005.

Table. Trends in PAs Working in Hospital Settings, 2003-2006

	Percentage (and number) of all AAPA Census Respondents			
	2003 N=18,155	2004 N=20,796	2005 N=19,951	2006 N=21,033
All hospital work settings	17.9%	17.8%	18.1%	18.6%
Intensive care/critical care unit	1.5% (280)	1.9% (392)	2.0% (403)	2.1% (446)
Inpatient unit	7.4% (1,335)	9.0% (1,865)	9.3% (1,848)	9.8% (2,059)
Operating room	9.0% (1,629)	6.9% (1,443)	6.8% (1,350)	6.7% (1,488)

Source: American Academy of Physician Assistants Annual Census, 2003-2006.

increased by more than 50%, from 280 to 446, or from 1.5% to 2.1% of all PAs who responded to the survey. There appeared to be a sharp upturn also in the numbers and percentages of PAs working in inpatient settings—from 1,335 (7.4% of survey respondents) in 2003 to 2,059 (9.8%) in 2006. By contrast, the percentage of PAs reporting working in hospital operating rooms fell from 9.0% to 6.7% during this period (see Table). The census does not identify those PAs who self-identify as hospitalists.<sup>9</sup>

**DISCUSSION**

The increase in PA utilization in inpatient hospital settings may be due to the ACGME resident work hours restriction, efforts by hospitals to restructure resident staffing patterns, or to other overlapping trends.

The decreasing percentage of PAs working in the operating room bears further investigation given the extent of overall PA utilization in surgery and the surgical subspecialties (nearly one-quarter of all practicing PAs). One explanation is the shifting of surgical services to the outpatient setting.

When a hospital residency program decides to employ PAs in resi-

dent slots, it makes a trade-off. While the salaries and benefits that hospitals must pay PAs are higher than those it would pay residents, the hospital can usually recoup this investment through reimbursable services under Medicare Part B.

Another trend affecting the utilization patterns of PAs in hospital settings is the growing number of postgraduate educational programs that aim to prepare PAs in specialized tracks. Postgraduate PA programs may increase in number as more institutions adopt staffing arrangements with PAs to fill vacancies of house officers. Another PA movement not well documented is the utilization of PAs as hospitalists; this is an example of the ways in which PAs continue to fill niches in the health workforce.

One limitation of this brief analysis is that the AAPA census may underrepresent certain groups. For example, the inpatient-based PA may not participate in surveys as frequently as those in other settings. Also, NPs may be filling roles in hospital-based care. Hospital-based PAs and NPs are not included in the American Hospital Association annual survey and the American Academy of Nurse Practitioners census does

not specify which hospital roles are filled by NPs.

The transfer of many inpatient tasks from residents to PAs may represent a larger shift in patient care for the United States. A focused effort should be undertaken to track the numbers and percentages of PAs working in hospital settings and in GME settings. If residency programs are turning to PAs as resident-adjunct staff on inpatient services, this trend should be documented and the efficacy of such policy decisions should be researched.

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