

# Incorporation of the Competencies for the Physician Assistant Profession into Physician Assistant Education

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The Competencies for the Physician Assistant Profession (Competencies) were developed and disseminated in 2006 by the American Academy of Physician Assistants (AAPA), the Physician Assistant Education Association (PAEA), the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA), and the National Commission on Certification of Physician Assistants (NCCPA). They are based on the competencies endorsed by the Accreditation Council for Graduate Medical Education (ACGME). This NCCPA Foundation-funded project describes (1) the integration of the Competencies within PA education, (2) obstacles to incorporating the Competencies, and (3) methods used to assess students based on the Competencies. A survey was developed based on a document developed by ARC-PA: “Comparison of ARC-PA Accreditation Standards for Physician Assistant Education, 3rd edition (2006), to the Competencies for the Physician Assistant Profession (2005).” The majority of program respondents (97.1%) reported being familiar with the Competencies and most programs (84.5%) are currently incorporating, or have successfully incorporated, the Competencies into their curricula. The two most frequent obstacles to incorporating the Competencies were reported as limited or lack of time, and difficulty identifying successful methods of assessment. Multiple-choice testing and the clinical preceptor’s evaluation of the student were the two most common methods used to assess the Competencies. These baseline data may help identify common obstacles and new challenges faced by PA programs, as well as provide representative organizations with information needed to help PA programs incorporate the Competencies into their curricula.

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## INTRODUCTION

In March 2006, the four national physician assistant (PA) organizations — the American Academy of Physician Assistants (AAPA), the National Commission on Certification of Physician Assistants (NCCPA), the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA), and the Physician Assistant Education Association (PAEA) — distributed the Competencies for the Physician Assistant Profession (Competencies), which had been jointly developed by the four organizations.<sup>1,2</sup> These organizations recognized the need for ongoing competency among PAs (as among all health care providers) and were responding, in part, to the Institute of Medicine (IOM) report, *Crossing the Quality Chasm: A New Health System for the 21st Century*, which described the frequency

of medical errors.<sup>2</sup> The PA profession demonstrates ongoing competency via the NCCPA certification and recertification processes. The Competencies function as a comprehensive document that successfully responds to the needs of patients, consumer advocacy groups, and health care organizations, while preserving the philosophy of the PA profession.<sup>1</sup>

The Competencies include six domains (medical knowledge, interpersonal and communication skills, patient care, professionalism, practice-based learning and improvement, and systems-based practice) and each domain includes several objectives (eg, the domain patient care includes the objective, “Counsel and educate patients and their families”). The document describes key components of competency, including “technical, cognitive, and emotional aspects of

practice” that are fostered in the educational setting and may well provide motivation for lifelong learning among practicing PAs.<sup>3</sup>

The PA Competencies are largely based on those endorsed by the Accreditation Council for Graduate Medical Education (ACGME).<sup>4,5</sup> Historically, the development of competencies within medical education has been followed by curricular assessment and incorporation of the competencies within accreditation standards.<sup>3,6</sup> Family medicine, emergency medicine, and internal medicine residencies are currently incorporating the ACGME competencies within their curricula.<sup>6,7,8,9,10</sup> Given this trend, this is an early and opportune time to describe the extent to which and frequency with which PA programs currently incorporate the Competencies into their curricula and describe the methods used by PA programs to assess students based on the Competencies.

### Objectives

The primary goals of the project were as follows:

1. Assess how familiar (ie, level of awareness) PA programs are with the document, the *Competencies for the Physician Assistant Profession*.
2. Evaluate potential obstacles PA programs may encounter in incorporating the Competencies into their curricula.
3. Identify methods used by PA programs to assess students based on each competency (ie, outcomes).

### METHODS

The authors used the ARC-PA document, “Comparison of ARC-PA Accreditation Standards for Physician Assistant Education, 3rd edition (2006), to the Competencies for the

**Table 1. Demographics of Program Respondents**

Survey Question	Response
1. Of which consortium is your PA program a member?	Northeastern (25%) Southeastern (19.4%) Midwestern (19.4%) Heartland (16.7%) Eastern (11.1%) Western (8.3%)
2. With which type of educational facility is your PA program affiliated (select all that apply)?	University (56.2%) Academic Health Science Center (26%) 4-year college (17.8%) Community College (4.1%) Hospital (2.7%) Military (1.4%) Other (1.4%) <sup>a</sup>
3. What is the terminal degree awarded by your PA program (select all that apply)?	MPAS (24.7%) MS (20.5%) MSPAS (12.3%) MHS (8.2%) MMS (6.8%) MMSc (5.5%) Other (26%) <sup>b</sup>
4. How many total students are currently enrolled in your program (ie, didactic- and clinical-year students)?	Mean 84.9
5. What is the total number of core faculty FTEs in your program?	Mean 6.4
6. What is the total number of credit hours awarded?	Mean 109 <sup>c</sup>
7. What is the length of your program, in months?	Mean 29.8
8. In what year did your program’s first class graduate?	Mean 1990 <sup>d</sup>

<sup>a</sup>Medical school. <sup>b</sup>Bachelor’s degree (12.3%); certificate (4.1%); associate’s degree (1.3%). <sup>c</sup>Includes semester and quarter hours. <sup>d</sup>One response was excluded as not plausible.

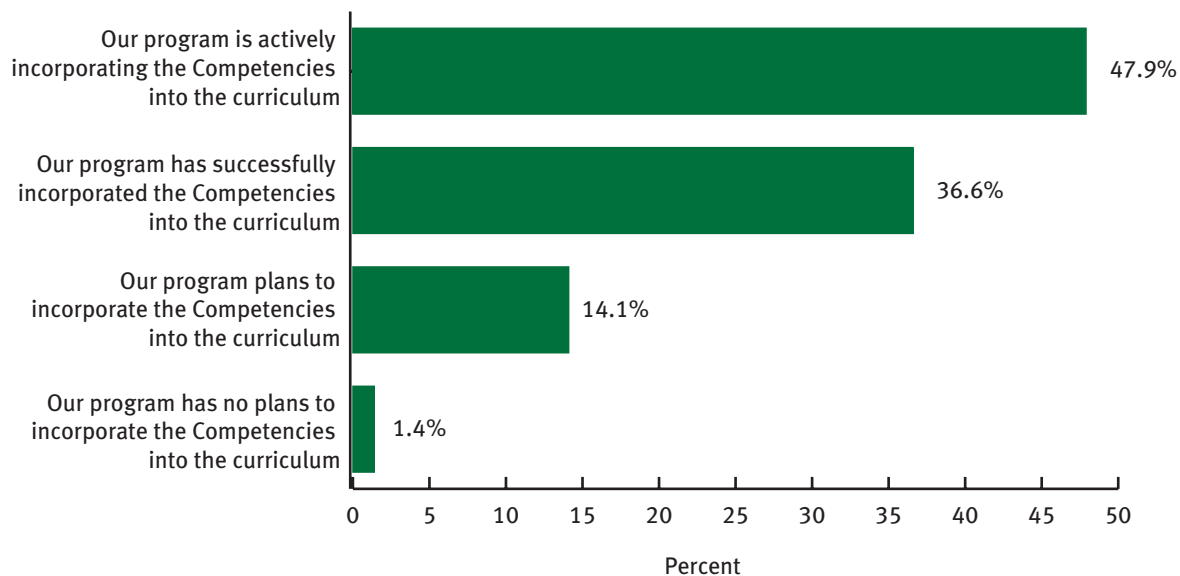
Physician Assistant Profession (2005)” (Comparison),<sup>11</sup> which correlates the Standards and the Competencies to the extent possible, to determine which competencies should be included in the survey instrument. The principal investigator (PI) selected a representative sample of competencies using the following criteria:

- The competencies must be closely aligned with the accreditation standards, as determined primarily by the “Comparison” document.

- The competencies should be exceptionally relevant to patient care and patient safety, similar to the model described by Chapman et al, which correlates clinical practice skills specific to emergency medicine with the ACGME core competencies.<sup>7</sup>
- The competencies must be measurable. While the majority of the competencies are included in the survey instrument, the investigators were wary of survey length and opted to exclude items that seemed marginally applicable

Figure 1. PA Program Incorporation of the Competencies

Responses to the statement, “To what degree does your program incorporate the Competencies for the Physician Assistant Profession?”



and/or challenging to measure in the population studied (ie, “Facilitate the learning of students and/or health care providers”).

Following approval from the university’s institutional review board and the NCCPA Foundation, a Web-based pilot survey was conducted via Survey Monkey, with a small random sample (approximately 10%) of PA program directors. This sample evaluated the clinical relevance of each competency within the survey and provided insight regarding survey content. Their feedback was incorporated into the survey instrument before final distribution. The final survey was sent to 139 PA program directors via Survey Monkey on February 18, 2008, followed by a reminder e-mail two weeks later. The data were delinked, anonymous, and handled in a confidential manner in accordance with university IRB procedures.

Survey questions included an assessment of program familiarity with the Competencies, degree of incorporation of the Competencies

into their current PA curricula, as well as an evaluation of potential obstacles encountered by the program. An additional section identified the methods used to assess student performance based on each competency. Participants were instructed to select all methods that apply. Standard program demographic information was also collected, including regional consortium, educational facility association, terminal degree awarded, total number of students and core faculty, total credit hours, length of program, and year of first class graduation. The survey instrument allowed survey respondents to provide qualitative comments to each question.

The survey data were collected by the Web-based service and sent to the investigators in the form of a Microsoft Excel spreadsheet. Statistical analysis of the results was largely descriptive in nature, including percentages (eg, the percentage of programs that use each assessment tool for each competency or that incorporate each competency into their cur-

riculum) and means, (the average number of total credit hours).

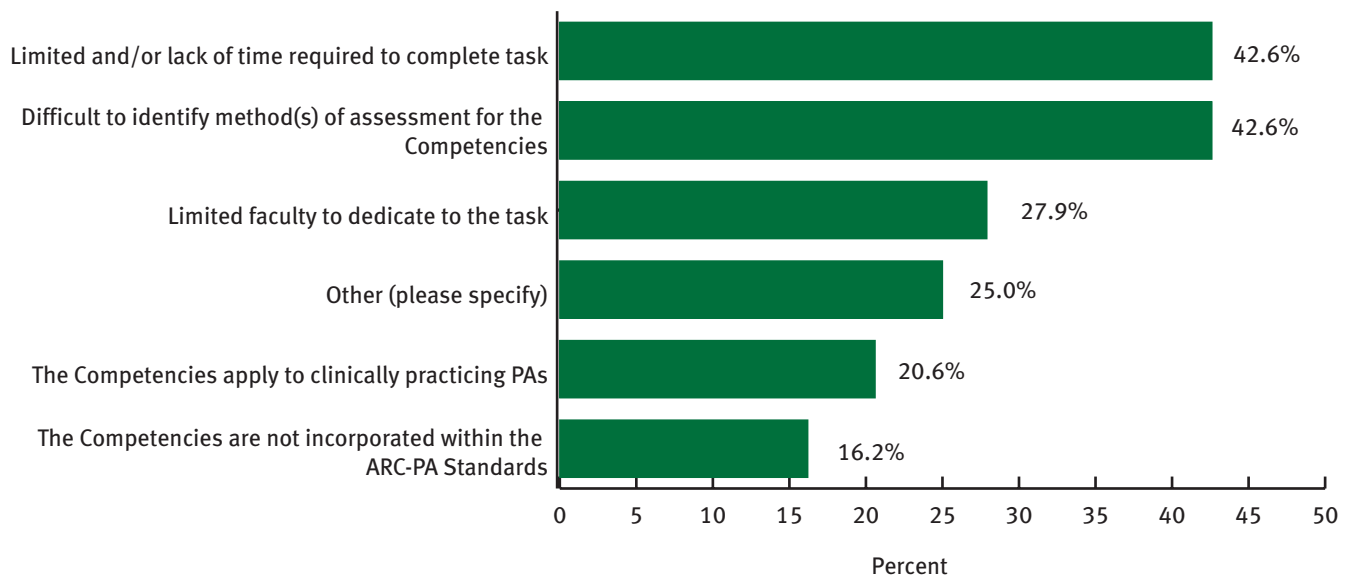
## RESULTS

Sixty-six surveys were completed, for an overall response rate of 47%. Nine incomplete responses were not included in the final analysis. A description of program demographics is provided in Table 1. In general, the distribution of responding programs corresponded to geographical distribution of all PA programs. The majority of respondents were associated with a university and the most common degree awarded was the master of physician assistant studies (MPAS) degree. The programs averaged 85 total students and 6.4 faculty FTEs and have graduated students for an average of 18.0 years.

The majority of programs reported being familiar with the Competencies (97.1% agreed or strongly agreed with the statement on familiarity). Most programs (84.5%) are currently incorporating or have successfully incorporated the Competencies into their curricula

Figure 2. Perceived Obstacles to Integrating the Competencies Within PA Curricula

Responses to the statement, “What are potential obstacles to incorporating the Competencies for the Physician Assistant Profession?”



Note: Respondents could select as many responses as applied.

(Figure 1). Fifteen percent of the program respondents have not incorporated the Competencies into their curriculum. The two most frequent obstacles to incorporating the Competencies were reported as limited or lack of time, and difficulty identifying successful methods of assessment (Figure 2).

The current methods of assessment for each of the six domains of the Competencies are summarized in Tables 2-7. Multiple-choice testing is the most common assessment tool for the domains of medical knowledge and practice-based learning and improvement. The clinical preceptor’s evaluation of the student is the most common assessment tool for the domains of interpersonal communication, patient care, professionalism, and systems-based practice. Broadly, PA programs utilize a variety of assessment tools to evaluate the medical knowledge domain and are increasingly creative in assessing all domains. Simulation labs, skills and procedures labs, case presentations,

and peer evaluations are unique approaches currently being used to assess the Competencies within PA education.

### DISCUSSION

The results of the current study suggest that the PA program respondents are familiar with the Competencies for the PA Profession and are currently incorporating, or have already incorporated them into their curricula. However, program respondents identified obstacles to the incorporation of the Competencies as (1) lack of time and (2) difficulty identifying appropriate assessment tools.

Although curricular evaluation should be an ongoing practice, active analysis typically occurs in conjunction with the accreditation self-study process. Regardless of when it occurs, comprehensive curricular evaluation is a time-consuming and faculty-intensive process. Incorporation and assessment of the Competencies, in addition to evaluation and analysis of the ARC-PA Standards, may be a daunt-

ing task for PA programs. Therefore, we support faculty development in the application of educational principles (ie, curriculum construction, analysis, etc.) and outcomes assessment. Providing PA faculty with these essential skills may provide new faculty members with effective mentors and assist programs to build a strong curricular foundation.

Program respondents place a significant reliance on clinical preceptors as the primary method of assessment for four of the six competency domains. This may reflect a number of factors: that the Competencies are more relevant to clinically practicing PAs than to a didactic-year PA student; that they are more applicable to clinical-year training than to didactic-year training; and that the PA Competencies were adapted from the ACGME model, which is largely based on residency education. Based on these results, programs may further develop valid and reliable assessment methods to evaluate students in the clinical year.

**Table 2. Assessment Tools for the Competency Domain Medical Knowledge (n=67)**

	Multiple Choice Exams	Standardized Patient Encounters	Essay Exams	SOAP Note Assignments	Preceptor's Evaluation of the Student	Competency Not Assesed	Other*
Understand etiologies, risk factors, underlying pathologic process, and epidemiology for medical conditions	67	41	13	43	59	1	9
Identify signs and symptoms of medical conditions	67	47	13	47	62	1	9
Select and interpret appropriate diagnostic or lab studies	66	42	12	49	64	1	9
Manage general medical and surgical conditions to include understanding the indications, contraindications, side effects, interactions and adverse reactions of pharmacologic agents and other relevant treatment modalities	65	33	13	42	60	1	9
Identify the appropriate site of care for presenting conditions, including identifying emergent cases and those requiring referral or admission	56	29	11	36	64	2	8
Identify appropriate interventions for prevention of conditions	64	39	13	39	59	1	9
Identify the appropriate methods to detect conditions in an asymptomatic individual	63	28	12	33	56	1	9
Differentiate between the normal and the abnormal in anatomic, physiological, laboratory findings and other diagnostic data	66	37	11	41	63	1	8
Appropriately use history and physical findings and diagnostic studies to formulate a differential diagnosis	65	49	15	47	60	2	8
Provide appropriate care to patients with chronic conditions	62	36	12	38	60	3	7

\*Other: Problem-based learning, oral presentations, faculty site visits

**Limitations**

Limitations to the current study include the overall length of the survey, which may have discouraged participation. The survey instrument could also be refined to clarify the time at which specific assessments occur. For example, the survey asked whether multiple-choice question

(MCQ) examinations were used to assess each competency. The survey implied that the MCQ exams occurred in the didactic year; however, MCQ exams could occur at any time throughout the PA curriculum, including the clinical year. Given the apparent emphasis on clinical year assessment tools, future projects may

include further delineating the temporal relationship between competency assessment and curricular experience (ie, didactic year vs. clinical year vs. both).

Additional limitations to the current study include a potential self-selection bias, in that programs not familiar with or actively incorporat-

**Table 3. Assessment Tools for the Competency Domain Interpersonal Communication (n=66)**

	Multiple Choice Exams	Standardized Patient Encounters	Essay Exams	SOAP Note Assignments	Preceptor's Evaluation of the Student	Competency Not Assesed	Other*
Create and sustain a therapeutic and ethically sound relationship with patients	27	37	11	14	56	4	11
Use effective listening, nonverbal, explanatory, questioning, and writing skills to elicit and provide information	29	48	7	26	56	3	14
Appropriately adapt communication style and messages to the context of the individual patient interaction	25	44	9	17	57	4	13
Work effectively with physicians and other health care professionals as a member or leader of a health care team or other professional group	18	16	5	13	64	2	12
Apply an understanding of human behavior	42	33	9	19	54	3	9
Accurately and adequately document and record information regarding the care process for medical, legal, quality, and financial purposes	38	33	12	44	60	1	10

\*Other: Problem-based learning, oral presentations, faculty site visits, videotaped assignments with standardized patients, role-playing

ing the Competencies into their curricula may have been less likely to respond. A self-report bias may also exist in that respondents may tend to over-report familiarity with the Competencies. These two biases suggest that the level of familiarity and incorporation of the Competencies by PA programs may indeed be an overestimate of true behaviors. There may also be various definitions of the term “familiar” in the survey instrument. Future studies may want to define this more clearly.

Nonetheless, this baseline information regarding competency integration and assessment may help identify common obstacles and new challenges faced by PA programs. This information, in turn, may pro-

vide the representative organizations with information needed to develop PA program assistance or education.

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**Table 4. Assessment Tools for the Competency Domain: Patient Care (n=66)**

	Multiple Choice Exams	Standardized Patient Encounters	Essay Exams	SOAP Note Assignments	Preceptor's Evaluation of the Student	Competency Not Assessed	Other*
Work effectively with physicians and other health care professionals to provide patient-centered care	16	14	3	10	62	3	12
Demonstrate caring and respectful behaviors when interacting with patients and their families	14	39	3	13	65	1	12
Gather essential and accurate information about their patients	34	43	6	47	62	1	13
Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment	54	35	9	35	60	1	12
Develop and carry out patient management plans	38	35	8	47	63	1	11
Counsel and educate patients and their families	30	38	8	39	62	1	12
Competently perform medical and surgical procedures considered essential in the area of practice	24	22	5	16	61	2	22
Provide health care services and education aimed at preventing health problems or maintaining health	41	32	10	28	61	23	13

\*Other: Simulation center, skills lab, practical examination, problem-based learning, faculty site visits, videotaped assignments with standardized patients, role-playing

164-167.

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**Table 5. Assessment Tools for the Competency Domain: Professionalism (n=66)**

	Multiple Choice Exams	Standardized Patient Encounters	Essay Exams	SOAP Note Assignments	Preceptor's Evaluation of the Student	Competency Not Assesed	Other*
Understand legal and regulatory requirements, as well as the appropriate role of the physician assistant	56	7	21	12	33	4	11
Demonstrate professional relationships with physician supervisors and other health care providers	12	14	6	8	61	3	11
Demonstrate respect, compassion, and integrity	16	34	8	8	61	3	16
Demonstrate responsiveness to the needs of patients and society	15	26	12	11	47	12	14
Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices	34	19	18	11	54	5	15
Demonstrate a sensitivity and responsiveness to patients' culture, age, gender, and disabilities	29	27	18	14	57	4	14

\*Other: Peer evaluations, role-playing, problem-based learning, faculty site visits, faculty evaluations in the didactic year

**Table 6. Assessment Tools for the Competency Domain: Practice-Based Learning and Improvement (n=66)**

	Multiple Choice Exams	Standardized Patient Encounters	Essay Exams	SOAP Note Assignments	Preceptor's Evaluation of the Student	Master's Project	Competency Not Assesed	Other*
Locate, appraise, and integrate evidence from scientific studies related to their patients' health problems	41	11	17	14	32	28	6	20
Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness	46	6	12	10	19	28	1	20
Apply information technology to manage information, access on-line medical information, and support their own education	31	11	9	12	22	28	4	24
Recognize and appropriately address gender, cultural, cognitive, emotional and other biases; gaps in medical knowledge; and other physical limitations in themselves and others	32	22	15	14	37	14	4	12

\*Other: Research course, evidence-based medicine course, capstone project, problem-based learning cases

**Table 7. Assessment Tools for the Competency Domain: Systems-Based Practice (n=66)**

	Multiple Choice Exams	Standardized Patient Encounters	Essay Exams	SOAP Note Assignments	Preceptor's Evaluation of the Student	Competency Not Assessed	Other*
Use information technology to support patient care decisions and patient education	23	13	8	15	40	8	17
Effectively interact with different types of medical practice and delivery systems	21	12	7	8	51	7	9
Understand the funding sources and payment systems that provide coverage for patient care	44	4	12	8	31	8	12
Practice cost-effective health care and resource allocation that does not compromise quality of care	28	10	9	11	38	13	15
Advocate for quality patient care and assist patients in dealing with system complexities	23	10	7	12	42	14	9

\*Other: Case presentations, faculty site visits, problem-based learning cases