

# Orthopedic Surgeons' Perceptions of Athletic Trainers as Physician Extenders

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**A**S PHYSICIANS are experiencing increased workload, many are hiring more support personnel. A physician extender performs some of a physician's tasks under the direct supervision of the physician.<sup>1</sup> Over the past forty years, certified nurse practitioners (NP-Cs) and certified physician assistants (PA-Cs) have developed a strong presence in the health care system and are playing an increased role in medical care as physician extenders.<sup>2,3</sup> In 2002, the U.S. Bureau of Labor Statistics ranked PA-C number 12 of the 15 fastest-growing occupations from 2000-2010.<sup>4</sup> Some orthopedic surgeons have employed certified athletic trainers (ATCs) to work in a physician extender role.<sup>5,6</sup> The athletic trainer is a unique health care provider who can work with the physically active population, provide knowledge regarding sports injuries and rehabilitation, and provide outreach services to local schools.<sup>7,8</sup> An ATC as a physician extender offers many benefits within an orthopedic setting, including an increased clinic throughput,<sup>9</sup> improved clinic efficiency,<sup>1,7,9</sup> and increased revenue<sup>10</sup> for a much lower cost compared that for NP-Cs and PA-Cs.<sup>10</sup> Athletic trainers also assist with patient education regarding injury management, resulting in greater patient satisfaction and compliance.<sup>1,2,6,9</sup> Although these benefits have been documented, many orthopedic surgeons are not aware of them.<sup>11</sup>

Although the athletic training profession was founded earlier than the emergence of NP-Cs and PA-Cs, there is a question about the accuracy of orthopedic surgeons' perceptions of the qualifications of ATCs. A quantitative, descriptive study was conducted

to investigate the perceptions of orthopedic surgeons in the Mid-Atlantic U.S. regarding different health care providers and their qualifications as physician extenders. It also examined the factors that may affect orthopedic surgeons' perceptions of ATCs as physician extenders.

## Methods

One hundred and one orthopedic surgeons practicing in Maryland, Washington D.C., Virginia, West Virginia, North Carolina, and South Carolina (Table 1) responded to a mailed survey. These respondents were part of a sample pool of 400 orthopedic surgeons randomly selected from the Mid-Atlantic U.S. The response rate for this survey was 27.1%. Table 1 presents the

**TABLE 1. SURVEY POOL FROM EACH STATE IN MID ATLANTIC U.S.**

State	Total MDs Practicing	MDs Sampled (n%)	MDs Returned (n%)
MD/D.C.	626	98 (24.5)	21 (20.8)
W. Virginia	114	18 (4.5)	3 (3.0)
Virginia	697	109 (27.3)	27 (26.7)
N. Carolina	758	118 (29.5)	37 (36.6)
S. Carolina	366	57 (14.2)	13 (12.9)
Total	2561	400	101

Note: Response rate: 27.1% (101/373). Twenty-seven subjects were removed from sample pool if their address was incorrect, they were retired, or were not currently practicing.

response rate for each state. Twenty-seven subjects were removed from sample pool due to incorrect address, retired status, or not currently practicing.

The survey consisted of demographic questions, health profession rankings, and an opinion question regarding hiring an ATC as a physician extender. The majority of the survey consisted of a task list (Table 2) for each profession (ATC, NP-C, PA-C). Respondents were asked to check each of the tasks that they felt each profession was qualified to perform.

Using each profession's scope of practice, a list of qualifications was created. Each respondent's perception of the profession was graded for accuracy based on this qualifications checklist. The accuracy of a respondent's perception was represented by a maximum score of 100.

## Results

According to the National Athletic Trainers Association, ATCs are qualified to perform the following physician extender tasks: blood pressure, pulse, patient history, splinting and casting, crutch fitting, gait training, therapeutic exercise and rehabilitation, constructing orthotics, and injury assessments.<sup>12</sup> According to American Academy of Physician Assistants<sup>4</sup> and the American Academy of Nurse Practitioners,<sup>13</sup> PA-Cs and NP-Cs are qualified to perform all the tasks on the checklist (Table

2), with the exception of constructing orthotics and performing major surgery. Based on these qualifications, the physician's perception score of each profession was calculated. The orthopedic surgeons surveyed had the least accurate perception of NP-Cs (72.0), and a more accurate perception of ATCs (78.6), and the most accurate perception of PA-Cs (87.5). Respondents who had served as a team physician had a more accurate perception of ATCs with a mean score of 80.9, whereas those who have not been a team physician had a mean score of 65.8.

Orthopedic surgeons who have a more accurate perception of ATCs are more willing to hire an athletic trainer as a physician extender:  $t(72.2) = 3.06, p = .003$ . Given the opportunity, 44% of those surveyed would hire an ATC as a physician extender. It was also determined that there are at least 96 ATCs, some of whom are dual credentialed as PA-Cs, working in Mid-Atlantic U.S. orthopedic clinics. Overall, 82% of the surgeons ranked PA-Cs as the most qualified physician extender.

## Discussion

A factor that affects an orthopedic surgeon's decision to hire an ATC is reimbursement for the services he or she provides. Many physicians were under the impression that services performed by ATCs could not

**TABLE 2. TASK CHECKLIST FOR EACH PROFESSION**

Please check as many that apply		
<b>Athletic trainers are qualified to do</b>	<b>Physician Assistants are qualified to do</b>	<b>Nurse Practitioners are qualified to do</b>
• BP/Pulse	• BP/Pulse	• BP/Pulse
• Medical History	• Medical History	• Medical History
• Splinting/Casting	• Splinting/Casting	• Splinting/Casting
• Crutch Fitting, Gait Training	• Crutch Fitting, Gait Training	• Crutch Fitting, Gait Training
• Therapeutic Exercise and Rehabilitation	• Therapeutic Exercise and Rehabilitation	• Therapeutic Exercise and Rehabilitation
• Injections	• Injections	• Injections
• Orthotics	• Orthotics	• Orthotics
• Dictation of Visit Summaries	• Dictation of Visit Summaries	• Dictation of Visit Summaries
• Assessments of Injuries	• Assessments of Injuries	• Assessments of Injuries
• Prescribe Prescriptions	• Prescribe Prescriptions	• Prescribe Prescriptions
• Perform Major Surgery	• Perform Major Surgery	• Perform Major Surgery
• Order Diagnostic Tests	• Order Diagnostic Tests	• Order Diagnostic Tests

Note. Each subject was asked to check each of the tasks that they felt the professions were qualified to perform. Using each professions' scope of practice, their qualifications were determined. Each subject's perception of each profession was graded for accuracy based on this checklist.

be reimbursed. The establishment of regulatory codes for athletic training, along with interpretations and clarifications of existing codes, has caused some major insurance companies to reimburse athletic training services.<sup>14</sup> As more physicians are educated about ATC reimbursement options, it is possible that they may be more willing to hire ATCs as physician extenders.

Although there are some ATCs practicing as physician extenders, athletic trainers still need to educate physicians about the qualifications of athletic trainers to serve as physician extenders through letters, conferences, mailings, and publications. Based on the survey results, some orthopedic practices are benefiting from the use of ATCs as physician extenders, and orthopedic surgeons who have an accurate perception of ATCs are more willing to hire them.

## Summary

Mid-Atlantic orthopedic surgeons have the most accurate perception of PA-Cs, because they have more exposure to the profession within their clinics. Exposure to athletic trainers while serving in the role of team physician increased the accuracy of orthopedic surgeons' perceptions of the qualifications of ATCs. As more orthopedic surgeons become aware of the benefits that can be realized from the use of ATCs as physician extenders, opportunities in the clinical setting are likely to increase.

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