Background and Purpose. Previous research suggests a lack of public knowledge regarding the conditions under which physical therapists (PTs) have the ability to treat patients and the educational requirements for physical therapists. Assessment of the public’s knowledge regarding the different conditions physical therapists can treat and the use of physical therapists as practitioners of choice will be crucial in the continued growth of autonomy in the profession of physical therapy.

Subjects. Residents of Western New York were randomly selected through a mailing service.

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The authors declare no conflicts of interest.

Approval from the Daemen College Human Subjects Research Review Committee was attained to conduct the study.

Funding for all components of the research was provided by the Daemen College Physical Therapy Research Fund.

Received January 19, 2012, and accepted February 26, 2013.

Methods. A survey was distributed throughout the Western New York area at random by a mailing service. Surveys were returned by recipients anonymously. Descriptive statistics and frequencies were used to analyze and compare data. A chi-square goodness of fit test was used to determine statistical significance for practitioner of choice. A chi-square test of association was performed to assess differential trends between groups.

Results. Physicians were the practitioners of choice and chosen most frequently as possessing the ability to treat 16 of 17 listed conditions.

Discussion. Medical doctors continue to be viewed as the practitioner of choice for the majority of medical conditions. The public is most likely to select a PT as their practitioner of choice for an ailment of musculoskeletal origin. The public is unaware of the training PTs receive in school and the settings in which PTs practice. Even in conditions for which the public demonstrated knowledge of PTs’ abilities and training, no correlation was found in an increase rate of selection of the PT as the practitioner of choice for the condition.

Conclusion. Physicians are the practitioners of choice for 16 of 17 listed medical conditions. The public demonstrates a basic understanding of the treating abilities of physical therapists solely in musculoskeletal practice, with a distinct lack of knowledge in all other areas.

Key Words: Patient education, Professional issues, Reflection, Practitioner of choice.

BACKGROUND AND PURPOSE

The physical therapist’s role in health care continues to evolve, with aspirations set towards attaining autonomous practice and becoming a practitioner of choice, i.e., an initial medical care provider for a health care consumer. The American Physical Therapy Association (APTA) affirmed, through their Vision 2020 statement, that “By 2020, physical therapy services will be provided by physical therapists (PTs) who are doctors of physical therapy, recognized by consumers and other health care professionals as the practitioner of choice to whom consumers have direct access for the diagnosis of, interventions for, and prevention of impairments, functional limitations, and disabilities related to movement, function, and disabilities related to movement.” The doctoral level of educational training that PTs currently receive allows for physical therapists to continue gaining viability as practitioners of choice for an array of medical conditions. The knowledge acquired through the educational process and clinical experiences are the foundational components of the argument to promote PTs as practitioners of choice.

Review of Literature

PTs demonstrate competence in treating conditions within their scope of practice as demonstrated by Child et al2,3 in studies conducted in 2005 and again in 2007, which explored the level of knowledge that PTs possess in diagnosing and treating conditions of a musculoskeletal origin through a written examination. Both studies demonstrated that PTs possess the greatest degree of knowledge concerning musculoskeletal conditions among medical professionals, excluding orthopedic surgeons.2,3 On an exam regarding musculoskeletal conditions, orthopedic physicians scored an average of 94%. PTs scored an average score of 75.9%, physical therapy students scored an average of 66.2%, family practice physicians scored an average

Physical Therapists as Practitioners of Choice: Consumer Knowledge of Practitioner Skills and Training

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of 61%, general surgeons scored an average of 59%, and medical students scored an average of 49% on the same examination.2,3 These results indicate that PTs possess the ability to treat based on the results of a study of use of musculoskeletal therapy.14 A PT's scope of practice and their results revealed that the public identified a different set of conditions for which PTs would use a PT most often in the treatment of a PT for the following conditions: shoulder pain (79%), back and neck injuries (69%), low back pain (63%), and a broken hip (60%).4 These results raise concern as a PT's scope of practice, as delineated by the New York State Office of Professions, encompasses many more conditions outside of the previously suggested musculoskeletal-based impairments.5 Fitzpatrick et al8 produced results, similar to those of the previously described study by Sheppard,12 regarding the public's limited perception of the ability of PTs to participate in the treatment of pregnant women. The level of inconsistency concerning the publics' view of the conditions under which PTs possess the ability to treat is concerning and substantiates the overall lack of knowledge the public possesses regarding PTs' education. If the public lacks an accurate knowledge base of which conditions that PTs may examine and intervene on, the public cannot advocate for their use of the profession of physical therapy via any route, i.e., direct access or referral by another appropriate medical professional.

In contrast to the rapid growth observed in the profession of physical therapy,6 the consumers’ knowledge regarding PTs' scope of practice and educational training continues to demonstrate a general lack of understanding in the aforementioned areas.7,8 While PTs demonstrate a high level of knowledge within their scope of practice,2,3,7,10,11 health care consumers lack knowledge regarding the abilities of PTs—leading to a failure for PTs to be identified as practitioners of choice.

Regardless of the legislation passed in favor of direct access and the level of competence of PTs, the health care consumers’ knowledge of the PTs’ scope of practice and educational training will dictate PTs' role as practitioners of choice. Sheppard’s12 survey of 510 individuals exhibited that the Australian public viewed chiropractors and physicians over PTs as the practitioner of choice for any back pathology. The identification by the public of conditions that PTs possess the ability to treat included the following: weak musculature, trunk/postural problems, and lower limb/gait abnormalities.12 Additionally, the public struggles to identify several other conditions that PTs possess the ability to treat, suggesting a lack of public knowledge regarding PTs scope of practice.12

Interestingly, research performed by Snow et al7 in 2001, which randomly surveyed 162 Florida residents, reported that the residents would use a PT most often for the following conditions: conditions with the back or neck (6.6%) and conditions with movement (19.1%). Furthermore, 14.8% of the participants identified that they were unsure of what conditions would warrant the treatment and intervention by a PT.7

PTs have provided treatment dating back to World War I; yet, the participants in this study still fail to identify the appropriate use of physical therapy.13 A PT’s scope of practice spans a much broader range of conditions than those identified by the participants of this study. A variety of items related to physical therapy and their results revealed that the public identified a different set of conditions for which PTs would use a PT most often in the treatment of a PT for the following conditions: shoulder pain (79%), back and neck injuries (69%), low back pain (63%), and a broken hip (60%).4 These results raise concern as a PT’s scope of practice, as delineated by the New York State Office of Professions, encompasses many more conditions outside of the previously suggested musculoskeletal-based impairments.5 Fitzpatrick et al8 produced results, similar to those of the previously described study by Sheppard,12 regarding the publics’ limited perception of the ability of PTs to participate in the treatment of pregnant women. The level of inconsistency concerning the publics’ view of the conditions under which PTs possess the ability to treat is concerning and substantiates the overall lack of knowledge the public possesses regarding PTs’ education. If the public lacks an accurate knowledge base of which conditions that PTs may examine and intervene on, the public cannot advocate for their use of the profession of physical therapy via any route, i.e., direct access or referral by another appropriate medical professional.

Although the public appears to lack a general understanding regarding the conditions that PTs may examine and treat, they appear to agree on the identification of potential physical therapy intervention strategies. Sheppard13 and Fitzpatrick et al8 both conducted separate studies via surveys to identify the public’s knowledge of potential physical therapy intervention strategies. The only overlapping intervention strategies identified by the 2 samples were exercise, massage, movement/walking, and the application of hot packs.8,12 In fact, the Guide to Physical Therapist Practice14 suggests potential intervention strategies that span far more treatment options than the options identified by the public.8,12 If the public fails to demonstrate an adequate knowledge regarding physical therapy intervention skills and strategies, then the likelihood of the PTs becoming practitioners of choice decreases. The similarities between the samples in each study, regarding other potential intervention strategies of PTs, suggest that the public’s limited understanding of PTs’ treatment methods is accurate. However, the public appears to only identify select potential intervention strategies related to musculoskeletal impairments and fails to include strategies of intervention for other areas of practice, such as neuromuscular conditions, integumentary conditions, and cardiopulmonary conditions.

More complex musculoskeletal interventions (e.g., the use of other physical agents, joint thrust and nonthrust manipulations, administration and education of in-home exercise programs, manual stretching, myofascial release, consultation, sensory training, repeated movements, balance training) also were unidentified by the public.

The public’s knowledge base of physical therapy is a combination of their understanding of the conditions that PTs treat and the intervention strategies PTs use to treat these conditions. A survey of 3,010 residents of Scotland regarding various items pertaining to physiotherapy revealed that approximately 23% of individuals reported limited to no knowledge of physiotherapy.15 In 2008, Holdsworth et al16 surveyed PTs and general practitioners from Scotland regarding a variety of items relating to physical therapy. Fifty-five percent of PTs surveyed opined that the general public lacks knowledge regarding physical therapy and PTs’ capabilities.16 While the public showed a general lack of knowledge regarding physical therapy, 96% of all general practitioners surveyed stated they were confident in the ability of PTs to diagnose and treat musculoskeletal conditions.16 Furthermore, 78% of general practitioners surveyed stated that patients experiencing musculoskeletal problems would benefit from a PT possessing the ability to prescribe nonsteroidal, antiinflammatory drugs and to request radiographs.16 General practitioners were not asked about their confidence in PTs’ abilities in areas other than disorders of a musculoskeletal pathology.16

Lack of knowledge concerning the education required to become a physical therapist and the required training also is evident in review of research. Fitzpatrick et al8 concluded that the public also possesses a general lack of knowledge regarding the required training and education PTs must receive. Furthermore, Fitzpatrick et al8 who surveyed 53 urban residents on various items related to physical therapy, concluded that 13% of the individuals surveyed demonstrated did not know that PTs must be licensed to practice physical therapy. In contrast to the results found by Fitzpatrick et al,8 APTAs’1 Vision 2020 statement describes an assertion that all physical therapy education programs will graduate with a Doctor of Physical Therapy (DPT) degree and all patients seeking physical therapy treatment will be treated by doctors of physical therapy. The lack of public knowledge concerning the profession of physical therapy and the profession’s education and licensure requirements further limit the ascension of PTs to the public’s practitioner of choice. In a commentary from the
Table 1. Results for the Question: “Please Select the Health Care Professional for Each of the Following Conditions That Would Be Your First Choice for Treatment”ab

<table>
<thead>
<tr>
<th>Provider</th>
<th>Arthritis</th>
<th>Back Pain: Acute</th>
<th>Back Pain: Chronic</th>
<th>Carpel Tunnel Syndrome</th>
<th>Chronic Pain</th>
<th>Diabetes</th>
<th>Health Promotion</th>
<th>Jaw Pain (TMJ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMT</td>
<td>3.3</td>
<td>3.3</td>
<td>3.7</td>
<td>2.6</td>
<td>3.5</td>
<td>0</td>
<td>4.4</td>
<td>1.9</td>
</tr>
<tr>
<td>DC</td>
<td>2.8</td>
<td>34.8</td>
<td>34.6</td>
<td>6.3</td>
<td>5.9</td>
<td>0</td>
<td>3.5</td>
<td>4.4</td>
</tr>
<tr>
<td>DPT</td>
<td>4.1</td>
<td>7.4</td>
<td>12.8</td>
<td>8.7</td>
<td>4.4</td>
<td>0.4</td>
<td>5.0</td>
<td>2.8</td>
</tr>
<tr>
<td>MD</td>
<td>78.9</td>
<td>48.0</td>
<td>41.3</td>
<td>71.3</td>
<td>76.7</td>
<td>91.7</td>
<td>57.0</td>
<td>60.9</td>
</tr>
<tr>
<td>Noneb</td>
<td>5.0</td>
<td>2.4</td>
<td>1.7</td>
<td>5.0</td>
<td>2.8</td>
<td>1.9</td>
<td>15.4</td>
<td>4.3</td>
</tr>
</tbody>
</table>

*Expressed in percentages.

abPercentages do not add to 100, as the options of others are not tallied here.

bNo practitioner of choice selected.

Abbreviations: CMT, certified massage therapist; DC, doctor of chiropractic; DPT, doctor of physical therapy; MD, doctor of medicine; TMJ, temporomandibular joint.

Physical Therapy journal in 2005, Bohmert,17 a PT states, “We must ask ourselves, what are we doing to influence healthy consumers’ thoughts about the value of physical therapy?” Despite the apparent awareness of the public’s general lack of knowledge of physical therapy, no sense of urgency is observed among the profession as a whole. Therefore, a portion of the blame for the lack of public knowledge concerning physical therapy must be allocated to the PTs themselves.

Notwithstanding previously described deficits in overall knowledge by the public in many facets of physical therapy, the public generally reflects positively upon experiences with PTs. In 1989, Durant et al13 surveyed 361 Indiana residents concerning the performance of PTs and direct access, finding the public’s experience with physical therapy to be mostly positive. Durant et al13 concluded that 44.6% of the sample claimed that PTs provided the best medical evaluation, which represents a total percentage greater than all other medical professionals (family physician, specialist physician, dentist, and chiropractor) combined in the study. Additionally, 74% of the sample stated that PTs represented the best health care provider regarding education to prevent and control symptom recurrence.13 Furthermore, the sample reported that PTs provided effective treatment in 94.3% of all episodes of care.13 The level of satisfaction with physical therapy services in the previously described research supports the fact that health care consumers receiving physical therapy are provided with quality and effective care. In the future, to further distinguish the PT as a competent health care professional in the public’s view as well as other medical professionals’ views, both trends of positive experience as well as interaction with physical therapy services must continue.

Current literature suggests that the public fails to identify PTs as practitioners of choice for areas in their scope of practice and that the public is unaware of the training and education PTs receive. Despite the approval of legislation permitting direct access to physical therapy in 2006 in New York State,5 no current published research exists in New York to identify the populations’ knowledge of PTs’ education and training or the rate of selection of PTs as practitioners of choice for an array of conditions.

The purpose of this current study was: (1) to identify the rate of selection by residents of Western New York of PTs as practitioners of choice in comparison to other medical professionals for various conditions and (2) to identify the knowledge base of residents in Western New York regarding the identification of which medical professionals possess the educational training and skill set to treat various conditions.

METHOD

Study Design

In a review of literature, no other surveys designed with a focus to identify the public’s practitioner of choice for various health conditions as well as the public’s knowledge base regarding the skills and training of PTs to treat various health conditions were found. As a result, a survey was designed by the team of researchers to assess the public’s practitioner of choice for various health conditions and to assess the knowledge that the public possessed regarding the training and skill of PTs to treat various health conditions. Prior to disseminating the survey randomly to the residents of Erie County, the survey was distributed to 5 licensed physical therapists not directly involved in this study (average experience, 12.4 years). Each PT reviewed the survey independently for face validity and concluded that the instruments design would capture data consistent with the research question.

Timeline

The longitudinal study was carried out over a span of 4 years—with 3 separate cohorts of researchers conducting the research under the same advisor, using the same survey. In the 4 years, 3 separate installments (in the years 2006, 2008, and 2009) of the survey were mailed out to residents of Erie County in Western New York.
Participants and Procedure

In the first 2 installments of the survey, 1,500 subjects were randomly selected from throughout Erie County via a computer-generated system. In the third installment of the study, 2,000 surveys were disseminated. There was no duplication of mailed surveys to the same participants over the 3 data collection years. All participants were mailed an envelope that included a survey, a cover letter with directions pertaining to completion of and return of the questionnaire, and an envelope with return address and prepaid postage. To reduce bias, the cover letter was sent on generic Daemen College letterhead and did not disclose any information that would lead the recipient to believe that the research was conducted on behalf of any particular health care occupation. All surveys were to be returned anonymously via mail, with identification administered only through a process of numbering the surveys as they were received. The letter explained that informed consent was acknowledged through the return of the survey. Basic demographic data (age, sex, zip code, etc) were requested and recorded based on response. Surveys with incorrect responses, including selection of no boxes or multiple boxes when instructed to select only one, were excluded from statistical analysis. Any individual identifying himself or herself as employed within the health care field also was excluded from the study.

Data Collection

A double-sided survey containing 2 primary questions was used. Review of the practice act of PTs as delineated by the New York State Office of Professions contributed to the design of the survey and 2 questions with closed statements were formulated. The first question asked the subject to select his or her first choice of medical professional to treat 17 different conditions. The second question listed the same 17 conditions and asked the subject to select any health care provider that he or she felt possessed appropriate training and skills to treat those conditions. It was noted that multiple selections were allowed. To limit subject bias, multiple medical professionals were listed for potential selection.

Sample Size

In 2006, 122 of the 1,500 (8.1%) mailed surveys were returned; in 2008, 167 of the 1,500 (11.1%) surveys were returned; and in 2009, 251 of 2,000 (12.5%) surveys were returned. Due to homogeneity of the sample size, all data were combined, resulting in a 10.8% return rate as 540 of 5,000 surveys were returned and met inclusion criteria.

Data Analysis

Data were analyzed using SPSS Version 17.0.\(^{18}\) Results of separate installments of the survey were compared and analyzed for homogeneity of samples through the use of mean age of sample, sex distribution of sample, and rate of item selection. Descriptive statistics of age and frequencies were calculated on the data sets for each item on the questionnaire, zip code, and sex. Practitioner of choice for each condition was assessed through the use of a chi-square goodness of fit test, with a P value of < .01—indicating statistical significance. The P value was reduced to < .01 to address the inherent increase in type I error when performing multiple comparisons among groups. A chi-square test of association was performed to determine if a statistically significant difference was observed in the selection of practitioner of choice between different decades, different sexes, and Medicare eligibility.

RESULTS

Respondents

Data were determined to be of a homogeneous nature; therefore, all data responses were combined into 1 data set for further analyses—yielding 540 total respondents. Of the 540 respondents, 535 reported age—yielding a mean age of 55.27 years old, with a standard deviation of 14.23 years. Of the 540 respondents, 536 reported sex, of which 272 (50.6%) were male respondents.

Practitioner of Choice

For 16 of the 17 conditions listed on the survey, medical doctors (MDs) were chosen most frequently as practitioners of choice,
and a statistical significance existed in practitioner of choice (Table 1). Doctors of chiropractic (DCs) and doctors of physical therapy (DPTs) were identified at equal frequencies as practitioners of choice \( (P < .0001) \) for poor posture. While DPTs were not the most frequently chosen practitioner of choice for any condition, the 4 conditions where DPTs ranked the highest were (1) weak muscles, (2) poor posture, (3) walking difficulties, and (4) sprains/strains. Figure 1 demonstrates how all 5 providers rated as practitioner of choice for these 4 conditions. As Figure 2 shows, a distinct discrepancy existed between DCs and DPTs regarding conditions of the spine. Respondents consistently identified doctors of chiropractic as practitioners of choice at much higher rates that DPTs, although still choosing MDs more often as practitioner of choice than either DCs or DPTs. While MDs were chosen as practitioner of choice for weak muscles (47.2%), DPTs were second in frequency of selection as practitioners of choice (33.5%). Excluding spine conditions, poor posture, and weak muscles, no medical professional was identified as the practitioner of choice for the remaining conditions within 20% of the frequency at which MDs were identified as the practitioner of choice.

Training and Skill Set

Similar to the results for practitioner of choice, MDs were the most frequently identified practitioner to possess the training and skill set to treat 16 of the 17 listed conditions (Table 2). DPTs (64.3%) were identified most frequently as the health care professionals with the training and skill set to treat poor posture, followed by MDs (61.5%) and DCs (57.8%). In contrast to the results for practitioner of choice, responses produced a 20% deficit between MD and the next most frequently selected health care professional in only 8 of the conditions concerning skills and training (Figures 3-4). DPT was selected at a frequency above 50% for possessing the training and skills for 9 of the 17 listed conditions and at a frequency below 25% for 4 of the 17 listed conditions.

Subject Age Differences and Sex Differences

The decades analyzed were individuals in their 20s (n = 20), 30s (n = 45), 40s (n = 135), 50s (n = 141), 60s (n = 101), 70s (n = 69), and 80s (n = 24). For all of the conditions demonstrating statistically significant differences between decadal groups, a chi-square goodness of fit test was performed to assess practitioner of choice. In the 20s age group, differing from the results reported when the data were analyzed as a whole, a statistically significant practitioner of choice existed for weak muscles \( (P = .004) \)—with DPT selected as practitioner of choice most frequently. For chronic neck pain, the 40s age group most frequently chose DCs as practitioners of choice \( (P < .001) \). The 30s, 50s, 60s, 70s, and 80s age groups all reflected the results for practitioner of choice similar to the sample analyzed as a whole, demonstrating that the MD was the practitioner of choice for 16 of the 17 conditions listed. None of the statistical analyses revealed a statistically significant difference in response between men and women for any of the conditions listed on the survey, nor were there significant differences between Medicare-eligible respondents versus non–Medicare-eligible respondents.

DISCUSSION

Concurrent with the findings of Snow et al.\textsuperscript{7} our research shows that the current frequency of the public using PTs as practitioners of choice is generally at a low level in com-

![Figure 1. Ratings as First Choice for Practitioner of Choice for All 5 Providers for the 4 Conditions for Which DPT Had Its Highest Rankings](image1)

![Figure 2. Ratings as First Choice for Practitioner of Choice for Spinal Conditions When Comparing DCs and DPTs](image2)
The following conditions on the survey administered in this research were of a musculoskeletal origin, e.g., arthritis, acute back pain, chronic back pain, carpal tunnel syndrome, jaw pain, acute neck pain, acute back pain, poor posture, sprains/strains, walking difficulties, weak muscles. However, despite the existing research suggesting that PTs possess a greater degree of knowledge of conditions of a musculoskeletal origin, PTs were not identified as practitioners of choice for any of the previously mentioned conditions.

Aside from the 20s age group selecting DPTs as practitioner of choice for weak muscles and the 40s age group selecting DCs as practitioner of choice for chronic neck pain, analysis of practitioner of choice by age difference failed to reveal significant differences in results for practitioner of choice. Respondents between the ages of 60 and 89 did not demonstrate a variance in the selection of MD as practitioner of choice for 16 of 17 conditions. This is concurrent with results from Carter and Rizzo, suggesting an inverse relationship between increased age and physical therapy use. Bohmert’s17 comments that marketing PT services was unethical through the 1970s may further explain the observed results in age differences. Lack of marketing of the profession of physical therapy through the 1970s may contribute to the overall lack of knowledge regarding physical therapy observed today. Furthermore, the 20s age group did identify DPTs most frequently as the practitioners of choice for weak muscles. While the 20s age group is represented by only 20 subjects in this study, this trend suggests a perceptual change in the use of PTs as practitioners of choice in younger generations. If the observed trend holds true, the younger generation may be a desirable target for marketing. The 20s age group may offer the potential to influence the future health care decisions as the greatest number of individuals with their parental years ahead of them.

In whole sample analysis, DCs were more apt to be identified as practitioner of choice for all spine conditions when compared to DPTs (Figure 2). These findings are in agreement with results from Sheppard, suggesting that in comparison to PTs, the public identifies DCs as the practitioner of choice for spine conditions. However, in a study by Cherkin et al., interventions and outcomes of DCs and PTs displayed no statistically significant differences in patients presenting with spine conditions. These results fail to correlate with the level of education and skill set each respective health care professional receives. Both professions receive training.
regarding evaluation and treatment of spine conditions and both possess the appropriate skills to manage patients presenting with spine conditions; however, the results of the current research suggest that the public fails to recognize DPTs as health care professionals of the same caliber as DCs in the area of spine conditions. The survey showed respondents considered DCs and DPTs equivalent in skill set; therefore, the public’s knowledge of the skill set and training of each profession is most likely not the source of the discrepancy in the area of practitioner of choice for this condition. Certainly, the results of this study illustrate the need for PTs to market themselves as practitioners of choice for spine conditions as the public acknowledges that the profession possesses the skill set to treat spinal conditions.

Similar to findings by Fitzpatrick et al.8 and Snow et al.,7 our research shows that the top conditions subjects identified PTs as possessing the ability to treat were all of a musculoskeletal origin (Figure 1). Furthermore, findings by Webster et al.15 that suggest a lack of public knowledge concerning physical therapy may contribute to the observed lack of selection of PTs as practitioner of choice and may hinder the public in identifying PTs as practitioners with the ability to treat the researched conditions. PTs were identified by only 22 of 540 respondents (4.07%) as possessing the ability to treat wounds. The data regarding treating abilities for wounds fail to correlate with the 4 primary areas of physical therapy practice: musculoskeletal, neuromuscular, cardiopulmonary, and integumentary.5 Wounds are categorized in the area of integumentary physical therapy practice, and course work in the area of wound care is completed by all DPT students during their professional education. In addition, a physical therapist may become a certified wound specialist following 2,000 clinical contact hours in a wound care setting and by passing a national board examination administered by the American Academy of Wound Management.20 The most effective contributions of PTs generally occur in the subacute and chronic stages of healing in wound care.21 The aforementioned data demonstrates the failure of correlation between skill set acquired by a PT in wound care and the public’s knowledge of this skill set. If PTs are to be viewed as practitioners of choice or part of the health care team in wound care, PTs must begin to advocate the ability of their profession to assist in the management of wounds.

Similar to the condition of wounds, the condition of vertigo also displayed a low response rate regarding the ability for PTs to treat this condition. While only 66 out of 540 respondents (12.22%) reported that PTs possessed the ability to treat vertigo, 493 out of 540 respondents (91.29%) identified MDs as health care professionals with the ability to treat vertigo. In the case of benign paroxysmal positional vertigo, research by Doll et al.22 shows that canalith repositioning techniques used by PTs often diagnose, treat, and cure patients with this condition in 1 session of physical therapy. The repeating theme of PTs needing to advocate for the abilities of their profession and educate the public to foster autonomy and growth for the profession is also applicable to the results for vertigo in this research.

As the data in Figure 5 show regarding discrepancy between practitioner of choice and treating abilities, no correlation exists between the public’s identification of PTs’ skills
and the public's selection of PTs as a practitioner of choice. Figure 5 demonstrates the conditions in which a discrepancy of at least 20% existed between practitioner of choice selection and identification of treating abilities, with treating abilities always exhibiting a greater frequency of responses. If the profession of physical therapy is to attain autonomy, then identification of the barriers preventing the public from acquiring knowledge regarding PTs' abilities is crucial.

The results of this research provide an insight into the current state of knowledge of the residents in Erie County of Western New York concerning the profession of physical therapy and the abilities a physical therapist possesses. With APTA and the profession of physical therapy continuing to advocate for legislation permitting direct access and the utilization of direct access by the health care consumer, health care consumer knowledge concerning physical therapy will be the salient factor in fostering professional autonomy. Our research explores the opinion of the respondents regarding the health conditions in which PTs can be used as practitioners of choice to conduct an examination and provide treatment. Furthermore, the research displays the current public state of knowledge in Erie County regarding the educational training and skillset PTs possess to treat an array of different conditions. Results of the current research provide a basis to discuss the areas that the public demonstrates adequate knowledge of the profession of physical therapy and the areas that the public displays a lack of knowledge regarding the abilities of a PT, providing a basis for future public education.

With the current level of health care reform, the next decade will likely be crucial to the profession of physical therapy in shaping the future direction of the profession and meeting the tenets of Vision 2020. Current research demonstrates that MDs continue to be the practitioner of choice for nearly all conditions that PTs possess an ability to treat. This assertion correlates to a lack of public knowledge regarding the treating abilities of PTs, the education of PTs, and the public's knowledge concerning direct access to PTs. Ideally, PTs would be selected by respondents at a rate similar to MDs for all conditions listed on the survey; however, the data from this research suggest that the public fails to identify PTs as possessing the ability to treat any of the conditions listed at an acceptable rate. Previous discussion attributes the lack of public knowledge to a failure of PTs to advocate for their profession, market the profession, and educate the public on the profession. Aside from these factors, additional contributors may be insurance constraints and the history of MDs being used as a "gatekeeper" to other health care professionals. Insurance constraints will only change if PTs negotiate for coverage as practitioners of choice and produce successful outcomes proving the efficacious nature of physical therapy. Furthermore, breaking the "gatekeeper" cycle of the health care world also will occur only when PTs are recognized by the public and health care professionals as professionals who possess the ability to competently treat conditions in their scope of practice and perform differential diagnosis to a level that significantly decreases patient risk.

The common theme running through all of these factors is the ability for the profession of physical therapy to affect the current state of these factors through future actions. The time for PTs to act is now, as achieving autonomy in practice will certainly present several challenges and occur over several years. The best avenue to begin the transformation of the profession into a self-advocating profession is through physical therapist educators providing the knowledge and instilling morals, values, and attitudes that will empower future PTs to conquer the challenges of truly achieving Vision 2020.

Future Research
Future research of similar nature is required in other areas in the United States to validate the results of this research. Focus of future research also should shift towards identifying the current knowledge base of other health care professionals concerning physical therapy. Furthermore, future research should consider assessing the current level of public knowledge concerning direct access, the current frequency of use of direct access, and the deterring factors as identified by the public of using PTs as practitioners of choice in a direct access setting.

Limitations
Limiting the extrapolation of the research to larger populations is the low return rate of only 10.8%. With a 10.8% return rate, the research cannot unequivocally confirm accurate representation of the all Erie County residents. However, as described in the methods section, the research was performed in 3 separate installments of the survey, allowing for 3 different samples to be surveyed, and all results when compared displayed a homogeneous nature. Furthermore, Visser et al. found that survey research with a lower response rate produced at least equally accurate results as research with a higher response rate. In another study performed by Holbrook et al., effects of a small sample size were explored in relationship to producing an accurate demographic representation, with results showing that the lower sample sizes were only minimally less accurate. The results of this study were from a sample from Erie County, which has 921,202 residents comprised of 48.2% males and 51.8% females, according to the 2010 US Census. Of these residents, 18.7% are within the age range of 20 to 34 years old, 34.9% are within the age ranges of 45 to 74 years old, and 15.6% are within the age ranges of 74 or older. Based on these data from the US census, we feel our sample represents the aforementioned demographics appropriately.

Another potential limitation in this research was the format of the survey. While the survey was intentionally designed to ask questions in a somewhat vague manner to prevent bias to any medical professional, this design created ambiguity concerning the medical conditions and terms provided to the reader—particularly in the area of diabetes and wounds. Greater detail regarding the element of medical care in question concerning these 2 conditions may have yielded different results. Furthermore, the use of "DPT" throughout the survey does not allow results to be directly extrapolated to PTs.

While limitations to this research do exist, the results from the study must still be considered valuable and significant. The data reported represent 3 separate installments of the same survey administered over different time periods of which all data were of a homogeneous nature. The consistency of data throughout the installments of this research validates the results reported as representative of the public of Erie County.

CONCLUSION

Conclusions from the research performed are as follows: (1) PTs fail to be recognized by the Erie County public in Western New York as practitioner of choice and fail to be frequently identified as practitioners with the ability to examine and treat many conditions within their scope of practice; (2) MDs serve as the Western New York's practitioner of choice for nearly all health conditions in our research; (3) Respondents in our research identified DCs and DPTs to possess similar levels of training to treat orthopedic spinal conditions, yet, the respondents still continue to select DCs at a much higher rate than DPTs as their practitioner of choice for orthopedic spinal conditions.
REFERENCES


