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A Practice Analysis Survey: Defining the Clinical Practice of Primary Care Physical Therapy

Edsen Bermudez Donato

LOMA LINDA UNIVERSITY

School of Allied Health Professions

A PRACTICE ANALYSIS SURVEY: DEFINING THE CLINICAL PRACTICE OF PRIMARY CARE PHYSICAL THERAPY

By

Edsen Bermudez Donato

A Publishable Paper in Lieu of a Thesis in Partial Fulfillment of the Requirements for the Degree Doctor of Physical Therapy Science

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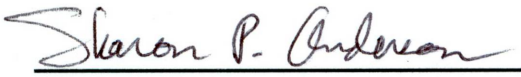
Each person whose signature appears below certifies that this publishable paper in his/her opinion is adequate, in scope and quality, as a publishable paper in lieu of a thesis for the degree Doctor of Physical Therapy Science.

Joseph J. Godges, Assistant Professor of Physical Therapy, Chairperson

Timothy W. Flynn, Associate Professor of Physical Therapy

US Army-Baylor Graduate Program in Physical Therapy



Sharon P. Anderson, Associate Professor of Physical Therapy (Voluntary)

Grenith J. Zimmerman, Associate Dean, Research and Professor of Biostatistics

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ABSTRACT

A PRACTICE ANALYSIS SURVEY: DEFINING THE CLINICAL PRACTICE OF PRIMARY CARE PHYSICAL THERAPY

by

Edsen Donato

Background and Purpose. Due to changes in the health care delivery systems, physical therapy services have moved toward a primary care model of practice. The purpose of this study was to identify the professional responsibilities, procedures, and knowledge areas of physical therapists practicing in primary care settings. **Subjects.** A sample of 212 physical therapists practicing in primary care settings, and a control group of 250 physical therapists not practicing in primary care settings were surveyed. **Methods.** The survey instrument was developed with the assistance of a National Advisory Committee (NAC) consisting of 12 subject matter experts. A modified Delphi technique was used to develop the survey instrument and it was pretested by a pilot group of seven physical therapists. The physical therapists were asked whether or not they performed each specified task, and to rate its importance to primary care. The final three-part survey instrument consisted of 171 items. **Results.** Of the 222 surveys mailed to the primary care group (PCG), 119 (56.1%) responses were received. Of the 250 surveys mailed to the control group (CG), 103 (41.2%) responses were received. The distribution of responses for each item was compared between the primary care and control groups using chi-square analyses for significant differences at the .001 level. **Conclusion and Discussion.** There were numerous significant differences in professional responsibilities, procedures, and knowledge areas between the primary care and control groups, most notably, in the areas of identifying signs and symptoms of non-musculoskeletal conditions, establishing physical therapy diagnosis, ordering imaging procedures, and prescribing over-the-counter medications. These results provide: 1) evidence that primary care physical therapists have unique knowledge, skills, and abilities when compared to non-primary care physical therapists, 2) useful data for defining the role and function of physical therapists in primary care, and 3) curricular direction to professional, post-professional, and clinical residency or fellowship-based educational settings.

Key Words: *Practice analysis, Clinical competencies, Primary care, Physical therapists.*

Medical care programs have moved towards primary care-based systems in order to provide accessible, cost-efficient, high quality health care.[1] Historically, physicians served as the principal providers of primary patient care services. However, nonphysician clinicians (NPCs) have proliferated in recent years due to new demands in the health care market, changes in state laws and regulations expanding NPC practice prerogatives, and an increased supply of practicing NPCs.[2-4] First-contact care with primary care clinicians has reduced ambulatory health care expenditures and has produced favorable outcomes.[5-10]

Physical therapists who are NPCs commonly function as primary care providers in the US military and civilian settings, and in countries such as England and Australia.[11-23] However, the unique knowledge, skills, and abilities of physical therapists practicing in this area have not been described. Descriptions of these clinical competencies are necessary to promote consistent high standards of health care, delineate the present scope of physical therapy practice, and provide data that will guide the curricula of physical therapist professional and post-professional education.

The purpose of this study was to describe the professional responsibilities, procedures, and knowledge areas of physical therapists practicing in the primary care setting.

METHODS

This study used a non-experimental descriptive research design following a commonly used practice analysis project plan.[24] This 15-step plan and timetable is provided in Table 1 and the methods associated with each step are briefly described.

Table 1.
Practice Analysis Project Plan

1. Develop project and design (8/98)
2. Conduct literature/document review (8/98-present)
3. Establish a National Advisory Committee (NAC) of subject matter experts (9/99)
4. Investigators develop sample draft of primary care competencies (7/99-8/99)
5. Review of sample draft of competencies by NAC (9/99-11/99)
6. Investigators develop first draft of survey instrument and review by NAC (5/00)
7. Investigators develop second draft of survey instrument and review by NAC (8/00)
8. Investigators develop final draft of the survey instrument (9/01)
9. Select survey-sampling parameters (12/00)
10. Pilot test of survey instrument (1/01)
11. Administer final survey and follow-up to target population (2/01)
12. Collection and analysis of data by psychometric consultant, Knapp & Associates International, Inc. (3/01-5/01)
13. Write draft of practice analysis research manuscript for publication (6/01-9/01)
14. Write draft of technical report (8/01)
15. Submit final copy of technical report to the Orthopaedic Section, APTA (9/01)

Conduct Literature/Document Review

A literature review (Appendix A) was performed that provided an overview of the following topics:

- Impact of musculoskeletal disorders on escalating health care costs
- The growth of NPCs in the health care delivery system
- APTA's statements and goals for the profession
- Physical therapy practice in the primary care setting

- Direct access utilization
- Primary care physical therapists (PCPTs) as physician-extenders in the military
- The independent role and function of physical therapists
- The attitudes of physicians toward the independent practice of physical therapists (particularly in the military setting), and their utilization of physical therapy services

Three peer-reviewed articles outlining the role and function of PCPT practitioners in the military were found.[11,12,14] However, the literature review did not reveal any practice analysis study describing the clinical practice of physical therapists in the primary care setting.

Establish National Advisory (NAC) Committee of Subject Matter Experts

A list of 67 potential NAC members was generated by the investigators using a purposive sampling approach based on recommendations of the investigators' research committees. The role of the NAC was to serve as subject matter experts, assisting in the development of the practice analysis survey instrument to comprehensively and accurately identify the professional responsibilities, procedures, and knowledge areas required of clinicians practicing in the primary care setting. These individuals were selected based on the criteria provided in Table 2.

Table 2.
Selection Criteria for NAC

1. Nationwide geographical distribution
2. Diversity of practice setting (e.g., HMOs, private practice, military)
3. Diversity of educational background
4. Diversity of clinicians versus educators
5. Diversity of subspecialties
6. Diversity of training backgrounds
7. Previous contribution to the advancement of physical therapy

After further review, a decision was made to narrow the list to 19 nominees based on availability as well as recommendations made by the investigators' research committees. These 19 nominees were sent an open-ended, 5-item questionnaire along with a sample list of primary care competencies (Appendix B).

A total of 13 responses were received. Eleven individuals were selected based on their availability for assisting the investigators with the development of the survey instrument. One of the original 19 nominees, who did not respond to the mailing, joined the NAC a month later. Thus, a total of 12 individuals became members of the NAC (Appendix C).

Developing the Survey Instrument

Initially, the investigators developed a list of primary care competencies. Thirty-one items were derived from one of the investigator's (RD) clinical experience of over 15 years in primary care, didactic and practical courses taken in the area of primary care, and from a review of standard textbooks related to primary care physical therapy.[25-29] This list of 31 competencies was sent to the NAC members with the 5-item questionnaire.

The initial responses given by the NAC contributed more than 200 unedited items. These items were edited for redundancies and compiled into the first draft of the survey instrument, which was reviewed by the psychometric consultant employed for this practice analysis (Joan Knapp, PhD, Knapp & Associates International, Inc., Princeton, NJ). This first draft of the survey instrument, which contained 191 items, was sent back to the NAC for review. Where appropriate, the terminology used in these competencies was altered to make them consistent with the terminology used in the *Guide to Physical Therapist Practice*.[32] Upon receiving the responses from the NAC, the items were again edited for redundancies and compiled into the second draft of the survey instrument. The second draft, which had increased to 232 items, was sent back to the NAC for their final review. After receiving the final response from the NAC, the list was again edited for redundancies and reviewed by the investigators. The list was narrowed down to 171 items and became the third and final draft of the survey instrument.

With the approval of the psychometric consultant, a 5-point Likert scale was used to rate the items in the survey. The survey instrument (Appendix D) consisted of four sections:

1. Demographic Information
2. Part I: Professional Responsibilities
3. Part II: Procedures
4. Part III: Knowledge Areas

The survey was designed to specifically answer the following research questions: 1) Do physical therapists who practice in the primary care setting have unique knowledge, skills, and abilities? 2) What clinical competencies are required for physical therapists to practice in the primary care setting?

Demographic Information

The demographic information included the state or country where the therapist practiced, highest level of education, number of years of practice in PCPT, type of educational preparation for current practice, gender, and age. The format for this section of the survey was closed-ended, fixed-response questions. Respondents were given an opportunity to provide information below each of the questions if the response was other than the fixed responses.

Professional Responsibilities

The purpose of this section was to ascertain what PCPT practitioners do in their day-to-day professional roles. In this section, respondents found a list of 65 professional responsibilities that had been grouped into clusters of related responsibilities called practice dimensions. The nine practice dimensions were:

1. Conduct Examination
2. Perform Evaluation
3. Determine Diagnosis
4. Determine Prognosis
5. Perform Intervention
6. Plan Discharge

7. Measure Outcomes
8. Participate in Primary Care Professional Development
9. Participate in Community Health Education

Respondents were asked whether or not they performed each listed task during their practice in PCPT. They were also asked to rate the level of importance of each task on a 0-4 Likert scale (0-not important at all, 1=minimally important, 2=moderately important, 3=highly important, 4=extremely important) regardless of whether or not they perform the task. At the end of this section, respondents were given the opportunity to comment or list any other important responsibilities that should have been included.

Procedures

This section focused on the 52 procedures that PCPT practitioners use in their work. These items were listed in two procedures dimensions:

1. Evaluation Procedures
2. Intervention

Again, respondents were asked whether or not they performed each listed task during their practice in PCPT. They were also asked to rate the level of importance of each task on the same 0-4 Likert scale used in the previous section, regardless of whether or not they perform the task. At the end of this section, respondents were given the opportunity to comment or list any other important procedures that should have been included.

Knowledge Areas

This section focused on the 54 knowledge areas that PCPT practitioners use in their work. There were seven knowledge dimensions:

1. Anatomy and Physiology
2. Examination, Evaluation, Diagnosis, and Prognosis
3. Intervention
4. Clinical Pharmacology

5. Diagnostic Imaging Sciences
6. Critical Inquiry
7. Ethical and Legal Considerations

In this final section, respondents were only asked to rate the level of importance of each knowledge area on the same 0-4 Likert scale used in the previous two sections. At the end of this section, respondents were again given the opportunity to comment or list any other important knowledge areas that should have been included.

Pilot Study of the Survey Instrument

To improve the content validity of the survey, a group of seven subject matter experts were chosen to pilot the survey (Appendix E). Except for two individuals who were members of the NAC, these individuals were chosen by a purposive sampling technique from a separate pool of PCPT practitioners. The investigators' research advisors recommended some of the individuals in the pilot group, who were chosen based on their experience in primary care and their availability to pilot the survey. Their responses served to validate the competencies, check the feasibility of this project, determine the time it took to complete the survey, and identify any remaining problems with instructions or procedures for filling out the survey. They were informed that a quick turn-around time for their response was necessary due to time constraints.

Final Version of the Survey Instrument

Final revisions and modifications were made based on the pilot group's comments, as well as final recommendations from the investigators' clinical research advisors. For question #9 on the demographic information section, the first choice was changed from "less than a year" to "I have not practiced in the primary care setting", the second choice from "1-2 years" to "less than 2 years" and the third choice from "3-5 years" to "2-5 years". This was done in order to accommodate the non-primary care control group of the target population. Using the responses given by the pilot group, an important change was made in Parts I-III with regard to the wording of the sentence instruction under Level Of Importance. It was noted that those who did not perform a certain task had a tendency to not rate the level of importance of that task.

Therefore, the words, "your current" were deleted from the instructions in order to remain generic and possibly encourage those individuals who did not perform a specific task to still rate the level of importance of that task.

Other suggestions included instructing the survey respondents to complete both sides of the survey (to minimize cost, the survey items were printed on both sides of the paper), and to keep all the relevant choices of a certain question in the demographic information section on one page.

Establishing a Control Group

To delineate and contrast knowledge, skills, and abilities of physical therapists in the primary care setting with those practicing in a non-primary care, non-direct access environment, the psychometric consultant recommended adding a control group from a non-direct access state. Physical therapists who served as the control in this investigation were all licensed to practice in the state of Ohio, a non-direct access state. In an attempt to obtain responses from the control group, the removal of "primary care" instructions and headings in the survey instrument was recommended by the psychometric consultant. It was believed that the above changes would not invalidate the survey as all the 171 competencies remained standard for both survey groups.

Administration of the Survey Instrument

Initially, the psychometric consultant had recommended that the responses given by the pilot group be included in the collected data pool from the target population. However, since changes were made to the survey instrument based on the pilot study, it was felt that their responses could not be included in the overall collected data pool unless they retook the final survey instrument. When the final survey instrument was mailed to the target population, copies were also sent to the pilot group and the NAC members. The following groups were sampled.

1. Military PCPTs.
2. Civilian PCPTs
3. Non-PCPTs in Ohio (a non-direct access state).

Physical therapists that were currently in primary care practice were solicited for participation in the study. This solicitation included placing advertisements in pamphlets distributed at annual professional meetings, verbal announcements at national professional meetings, advertisements in the Orthopaedic Section of the American Physical Therapy Association's quarterly news magazine, and mass e-mail announcements to military physical therapists utilizing the electronic mailing services voluntarily provided by each of the physical therapy corp chiefs of the three major service branches of the US military. A total of 212 PCPTs were solicited.

The control group was determined as follows: The investigators started with a list of 5,398 licensed physical therapists provided by the Ohio state chapter of the American Physical Therapy Association, and excluded 773 physical therapists who were currently practicing out of state, leaving 4,625 physical therapists. Dividing this number by 250 gave a sampling interval of 18. Surveys were mailed to the 250 individuals determined by this systematic sampling scheme. A modified version of Dillman's Total Design Method[30] was used in the administration of the mail survey.

The Survey Packet

Each survey packet included a cover letter explaining the purpose of the study, assurance of confidentiality, and instructions for returning the survey instrument; a self-addressed stamped envelope; and the survey instrument. For tracking and analytical purposes, a code was marked on the top right hand corner of each survey instrument that corresponded to a coding system allowing the investigators to determine the origin of each survey response. Surveys that were sent to Ohio (control group) were designated as "O" along with the corresponding number of the survey (e.g., O-1, O-2), and surveys that were sent to the primary care group (i.e., army, navy, or air force) were designated as "MA", "MN", MAF" along with the corresponding number of the survey (e.g., MA-1, MN-1, MAF-1). The list of names and addresses of the survey sample was kept strictly confidential and it was destroyed upon completion of the data collection phase.

Fourteen military physical therapists, who were part of the 212 PCPTs, were sent an electronic version of the survey instrument via the Internet due to time constraints and the therapists' preference over regular mail.

Follow-Up Mailing

Approximately one week after the mailing, follow-up postcards were sent to the primary care and control groups. The purposes of this postcard were to encourage those who had not completed the survey instrument to fill out the survey and to help ensure that individuals had received the survey packet. If they had misplaced the survey instrument, they were asked to call the investigators for another copy.

Follow-Up With Non-respondents

Four weeks after the initial surveys were mailed, the PCPT non-respondents in the US military were again sent a reminder that their participation was important to this research study and that their contribution would assist the profession in delineating the role and function of PCPTs. The investigators chose to target the US military PCPT group with the four-week follow-up mailing because it was believed that this group most clearly reflected the current practice of PCPT.

Data Analysis

The psychometric consultant prepared the data set layout for the analysis and reviewed all raw data. These data were entered for analysis using the SAS statistical package (SAS/STAT Software. Cary, NC 27513; 1997). Frequency distributions were calculated for each variable in the demographic information section as well as individual items in Parts I-III. Means were calculated for all items measured on a Likert scale. (Key for categorizing the mean importance rating: 0-0.4=not important at all, 0.5-1.4=minimally important, 1.5-2.4=moderately important, 2.5-3.4=highly important, 3.5-4.0=extremely important). These calculations were done for the two groups separately. The individual items were compared using chi-square analysis. Because of the large number of items on the survey, the alpha level was set at .001 for all analyses.

RESULTS

Of the 212 surveys mailed to the primary care group (PCG), 119 were returned for a response rate of 56.1%. Of the 250 surveys mailed to the control group (CG), 103 were returned for a response rate of 41.2%.

A description of survey respondents is shown in Table 3. Based on the responses, the typical respondent in the PCG is male, between 26-44 years of age, and has either an entry-level bachelor's (50.4%) or master's (48.7%) degree in physical therapy. Thirty-one percent of PCG respondents were board certified specialists in physical therapy. They spend 33.2% of their time providing direct primary care, 32.6% in direct patient care, 18.1% in administration/management, and the rest in teaching, consultation, research, and other activities. More than 50% of the respondents currently work in military-based hospital outpatient care settings and 73.7% of PCPTs surveyed have work experience that includes working as a physical therapist in the military. The PCPT practitioner is most likely to have developed his present level of clinical skills in workshops, seminars, or study group settings (29.4%).

In the CG, the typical respondent is female, between 26-54 years of age, has a bachelor's (77.7%) degree, and most are not board certified in physical therapy. She spends 63.7% of her time providing direct patient care (non-primary care), 16.0% in administration/management, and is also most likely to have developed her present level of clinical skills in workshops, seminars, and study group settings (33.0%). More than 50% of the respondents worked in civilian-based hospitals (outpatient care (24.3%), inpatient care (10.7%)), skilled nursing facilities (16.5%), or private practice settings (12.6%).

Table 3.
Description of Survey Respondents

Variable	**Total Group N=222 %**	**Primary Care N=119 %**	**Control N=103 %**
Gender			
Men	43.7	66.4	17.5
Women	56.3	33.6	82.5
Age			
Under 25	4.5	0.8	8.7
26-34	38.7	35.3	42.7
35-44	33.8	44.5	21.4
45-54	18.5	16.8	20.4
55-64	3.6	2.5	4.8
65 or over	0.9	0.0	1.9

Table 3 (Cont'd).
Description of Survey Respondents

Variable	Total Group N=222 %	Primary Care N=119 %	Control N=103 %
Ethnic Background			
African American	0.5	0.8	0.0
Asian American	3.1	5.0	1.0
Caucasian, non-Hispanic	94.1	90.8	98.1
Chicano/Mexican American	0.9	1.7	0.0
Puerto Rican/Puerto Rican American	0.5	0.8	0.0
Other	0.9	0.8	1.0
Entry-Level Education*			
Certificate	11.3	7.6	15.5
Bachelors	63.1	50.4	77.7
Masters	34.2	48.7	17.5
Doctoral	1.4	1.7	1.0
Other	0.5	0.8	0.0
* Some respondents have more than one degree			
Post-Professional Residency*			
Yes	11.7	16.0	6.8
No	87.8	84.0	92.2
* There is 1 missing response from the CG			
Board Certification*			
Yes	18.9	31.1	4.8
No	79.7	67.2	94.2
* There are 3 missing responses (2 from the PCG, 1 from the CG)			
Years Practicing Physical Therapy*			
Less than a year	3.1	2.5	3.9
1-2 years	12.2	8.4	16.5
3-5 years	21.6	18.5	25.2
6-10 years	17.6	21.0	13.6
11-15 years	16.2	19.3	12.6
16-20 years	9.9	13.4	5.8
21 or more years	18.9	16.0	22.3
* There is 1 missing response from the PCG			
Years Practicing in Primary Care*			
Never	14.9	3.4	28.2
Less than 2 years	16.7	16.8	16.5
2-5 years	22.5	25.2	19.4
6-10 years	19.4	26.1	11.7
11-15 years	11.7	14.3	8.7
16-20 years	6.3	9.2	2.9
21 or more years	5.9	4.2	7.8
Not Applicable	0.9	0.0	1.9
* There are 4 missing responses (1 from the PCG, 3 from the CG)			

Table 3 (Cont'd).
Description of Survey Respondents

Variable	Total Group N=222 %	Primary Care N=119 %	Control N=103 %
Mean Percent Time in Professional Activities			
Patient Care	47.0	32.6	63.7
Primary Care PT	21.4	33.2	7.7
Consultation	4.7	4.9	4.4
Admin/Management	17.1	18.1	16.0
Teaching	6.1	7.7	4.2
Research	1.7	3.0	0.1
Other	2.0	0.4	3.9
Setting of Majority of Professional Responsibilities*			
Military Hospital--Outpt Care	30.2	56.3	0.0
Military Hospital--Inpt/Acute	0.9	0.8	1.0
Military Educational Facility	2.2	4.2	0.0
Civilian Hospital--Inpt/Acute	5.4	0.8	10.7
Civilian Hospital--Outpt Care	14.4	5.9	24.3
Civilian--Medical Group/Outpt Care	5.9	4.2	7.8
Civilian--Private Practice/Outpt	12.2	11.8	12.6
Civilian--Academic Institution	2.7	2.5	2.9
Civilian--Rehabilitation Center	1.8	0.0	3.9
Extended Care Facility/Nursing Home	7.7	0.0	16.5
Home Health Agency	3.1	0.0	6.8
Business/Industry	0.4	0.8	0.0
Other	10.4	10.1	10.7
Not Applicable	1.3	0.8	1.9
* There are 3 missing responses (2 from the PCG, 1 from the CG)			
Education Method Most Influence Present Level of Clinical Skills*			
Self-Study	13.1	15.1	10.7
Inservice, Peer Interaction	20.3	10.1	32.0
Workshops, Seminars, Study Groups	31.1	29.4	33.0
Mentoring	13.1	16.8	8.7
Primary Care PT Residency	4.5	3.4	5.8
Graduate Program	13.1	18.5	6.8
Other	4.5	5.9	2.9
* There is 1 missing response from the PCG			

Analysis of Performance and Importance Ratings for Professional Responsibilities

Respondents were asked to indicate whether they performed the responsibilities in physical therapy practice as listed in Table 4. The percentage of respondents answering "yes" for each individual task under the nine practice dimensions is given by group. There were twenty-two professional responsibilities that had significantly different responses from the primary care and control groups. The responsibilities that were significantly different between the two groups involve selecting, ordering, prescribing, and providing prevention strategies. Additionally, four of these responsibility areas were markedly different between the primary care and control groups. These included, "Select and order imaging procedures..."; "Identify abnormalities and signs potentially arising from visceral structures..."; "Establish a physical therapy diagnostic or syndrome classification..."; and, "Prescribe and/or administer over-the-counter medications...".

In interpreting these data and analyses, it is important to consider the actual differences to determine if the significant differences are meaningful. As an example, "Select and order imaging procedures..." reveals an actual difference of 69% (74% versus 5%). This indicates that few participants from the CG have this as one of their responsibilities, whereas, three-quarters of the PCG do this as part of their practice. In contrast, even though the difference in percent is statistically significant for "Consult with other health care practitioners...", the actual difference (11%) is quite small. In addition, because the majority of each group performs this responsibility (98% versus 87%), there appears to be only a minimal distinction between the primary care and control groups in mean percentages.

Mean importance ratings were computed for each item from the "Professional Responsibilities" section of the survey instrument. For Professional Responsibilities, 59 of 65 (91%) items were rated as either highly important (35 items) or extremely important (24 items). The means of individual items under each dimension were ranked in order of importance for the PCG. Table 5 shows items in the PCG ranked greater than 2.4 (highly important=2.5-3.4; extremely important=3.5-4.0) in each practice dimension with the exception of one item under Use Tests and Measures category. Although this item was not rated greater than 2.4, it was included due to a statistically significant difference between primary care and control groups. There were eight items that were significantly different between the primary care and control groups. Again, the PCG rated "Identify abnormalities and signs...", and "Select and order imaging

procedures..." as highly important (mean=3.3) compared to the CG who rated it as moderately important (means=2.6 and 2.1, respectively). Although both groups rated establishing physical therapy diagnoses as highly important to extremely important, the PCG considered this to be extremely important (mean=3.7) compared to the CG who rated it as highly important (mean=2.8). Prescribing OTC medications was rated highly important (mean=2.7) by the PCG compared to the CG who rated it as minimally important (mean=1.2).

Table 4.
Percent of Physical Therapists Performing Professional Responsibilities for the Primary Care Group (PCG) and Control Group (CG)

	Percent	
PART I: PROFESSIONAL RESPONSIBILITIES		
I. CONDUCT EXAMINATION		
A. OBTAIN HISTORY	**PCG**	**CG**
Assess the patient's/client's communication ability, affect, and learning style.	96	96
Determine the patient's mental status and psychological function (e.g., cognition, memory, reasoning ability, anxiety, and depression).	90	96
Identify the patient's major problem (s) and/or concern (s).	100	98
Obtain the patient's description of their current functional limitations and/or recent changes in their physical function.	100	97
Determine the patient's normal level of physical activity and functional capacity.	100	97
Determine the area, type, time behavior, aggravating/easing factors, and past history of each presenting symptom.	99	95
Obtain the patient's description of any disability (i.e., the inability to participate in a desired social role) associated with their functional limitations.	97	96
Identify the patient's expectations, perceptions, and goals for the physical therapy intervention.	97	95
Identify the patient's family, significant other, and caregiver expectations, perceptions, and goals for the physical therapy intervention.	75	86
Identify the patient's social support systems, including family and caregiver resources.	82	92
Identify cultural beliefs and behaviors that may have an impact on health.	78	77

* Significant differences between the two groups. (chi square analysis, $p<.001$)

Table 4 (Cont'd).
Percent of Physical Therapists Performing Professional Responsibilities for the Primary Care Group (PCG) and Control Group (CG)

	Percent	
B. PERFORM SYSTEMS REVIEW	**PCG**	**CG**
Conduct a review of systems (e.g., cardiovascular, pulmonary, endocrine, gastrointestinal, urogenital, nervous, integumentary, psychological).	65	67
Discern signs and symptoms that suggest medical disease or an underlying condition outside the scope of physical therapy practice that requires consultation and/or referral to a physician and/or other health care practitioners.	97	95
Identify co-existing health problems (e.g., substance abuse, physical abuse, inadequate nutrition and hydration, cardiac risk factors) that have implications for physical therapy intervention and/or referral to another health care practitioner.	94	94
Identify current medications and their implications for physical therapy intervention.	97	90
Identify prevention needs (e.g., fall prevention, lifting instructions, risk factor modification, effects of stretching and strengthening on muscle imbalances) of the patient/client.	98	97
C. USE TESTS AND MEASURES		
Select and administer physical examination procedures that will help verify the presence of a suspected medical condition.	97*	78*
Select and order laboratory tests needed to obtain information about patient's current medical condition (e.g., sedimentation rate, uric acid analysis).	26*	3*
Select and order imaging procedures needed to obtain information about patient's current medical condition (e.g., radiographs, MRI, CT scans).	74*	5*
Select and order non-imaging examination procedures to obtain information about patient's current medical condition (e.g., EMG testing, NCV studies, resting or exercise ECGs, Doppler studies).	39*	6*
Select and administer physical examination procedures that will determine the cause of the patient's loss of function (e.g., the key impairments related to the patient's reported functional limitations).	96	86
Identify abnormalities and signs potentially arising from visceral structures of the head, neck, chest, abdomen, and pelvis while performing the musculoskeletal examination.	85*	58*
Determine the measurement characteristics (reliability, validity, sensitivity, specificity, and likelihood ratios) of the historical factor, tests, and measures employed during the examination.	60*	34*
Consult with other health care practitioners, when necessary, to interpret tests and measures (e.g., primary care physicians, radiologists).	98*	87*

* Significant differences between the two groups. (chi square analysis, $p<.001$)

Table 4 (Cont'd).
Percent of Physical Therapists Performing Professional Responsibilities for the Primary Care Group (PCG) and Control Group (CG)

	Percent	
II. PERFORM EVALUATION	**PCG**	**CG**
Perform evaluation of patients/clients with *neuromusculoskeletal complaints* with or without referral from a physician or other health care practitioner in compliance with relevant physical therapy state practice acts.	98	92
Perform neuromusculoskeletal evaluation of patients with *acute disease and disability* (e.g., traumatic injury to soft tissues and joints) with or without referral from a physician or other health care practitioner in compliance with relevant physical therapy state practice acts.	95	85
Perform neuromusculoskeletal evaluations of patients with *chronic disease and disability* (e.g., rheumatic diseases, diabetes, neuropathies, dystrophies, myopathies, and CNS conditions) with or without referral from a physician or other health care practitioner in compliance with relevant physical therapy state practice acts.	79	85
Perform vocational assessments of the permanently impaired patient/client with neuromusculoskeletal disorder.	24	27
Determine the need for extremity bracing, splinting, or casting.	89	73
Determine the patient's/client's ability to benefit from physical therapy.	99	97
Determine the need for referring the patient/client to another health care practitioner.	100	97
Determine/diagnose the relation between physical impairments, functional limitations, and disabilities in patients with musculoskeletal, neuromuscular, cardiopulmonary, and integumentary disorders.	94	88
III. DETERMINE DIAGNOSIS		
Establish a physical therapy diagnostic or syndrome classification label encompassing a cluster of signs and symptoms (e.g., patellofemoral pain syndrome, lumbar derangement syndrome), whenever possible.	98*	69*
Determine the diagnostic code (e.g., ICD-9 code, ICIDH code) most appropriate for each patient.	90*	53*
IV. DETERMINE PROGNOSIS		
Design the physical therapy intervention (i.e., the most appropriate treatment approach and strategy for each patient/client) based on the examination and/or re-examination data.	100	98
Determine the degree to which intervention is likely to achieve anticipated goals and desired outcomes.	97	96

* Significant differences between the two groups. (chi square analysis, $p<.001$)

Table 4 (Cont'd).
Percent of Physical Therapists Performing Professional Responsibilities for the Primary Care Group (PCG) and Control Group (CG)

	Percent	
V. PERFORM INTERVENTION	**PCG**	**CG**
Prescribe and/or administer over-the-counter medications, when indicated, for patients presenting to physical therapy with neuromusculoskeletal conditions/dysfunctions.	56*	7*
Prescribe and/or administer non-narcotic medications, when indicated, for patients presenting to physical therapy with neuromusculoskeletal conditions/dysfunctions.	39*	7*
Administer appropriate cardiopulmonary emergency procedures when necessary (e.g., BCLS, collaborative ACLS).	81*	52*
Develop and provide primary preventive interventions (e.g., general health promotion).	94*	77*
Develop and provide secondary preventive interventions (e.g., early diagnosis and prompt intervention).	90*	63*
Develop and provide tertiary preventive interventions (e.g., limiting morbidity of chronic and irreversible diseases).	73	60
VI. PLAN DISCHARGE		
Educate the patient/client and the family, significant others, caregivers, or other professionals about the current neuromusculoskeletal condition and plan of care.	99	98
Based on the physical therapy examination and/or re-examination data, provide recommendations for return-to-work status for patients.	95	63
Facilitate the continuity of care in patients receiving physical therapy who are progressing from acute, to subacute, to home health, to outpatient care.	59	66
Manage the coordination of care with the patient/client, family, significant others, caregivers, other professionals, and other relevant persons and ensure that the coordination of necessary care has satisfactorily occurred.	68	73
Provide for appropriate post discharge, follow-up, or referral.	83	72

* Significant differences between the two groups. (chi square analysis, $p<.001$)

Table 4 (Cont'd).
Percent of Physical Therapists Performing Professional Responsibilities for the Primary Care Group (PCG) and Control Group (CG)

	Percent	
VII. MEASURE OUTCOMES	**PCG**	**CG**
Develop or assist with the development of research proposals for measuring the effectiveness of primary care physical therapy.	38*	17*
Determine patient/client satisfaction following physical therapy intervention for an episode of care.	85	71
Implement region-specific and disease-specific outcome measures related to the management of neuromusculoskeletal conditions.	52*	22*
Implement general health outcome measures related to management of the neuromusculoskeletal conditions.	46	28
Design, conduct, analyze, and disseminate research pertaining to evaluation and management of neuromusculoskeletal conditions.	36*	10*
Develop and define norms and other evidence-based measures to assess and predict risks for early intervention.	23*	7*
Use outcomes to monitor overall medical costs (e.g., amount of specialty referrals and procedures performed).	31*	13*
Use outcome to monitor quality of care delivered.	75*	47*
Determine costs associated with physical therapy interventions (e.g., number of visits, cost per visit) for episodes of care for a specific diagnostic category.	48*	26*
VIII. PARTICIPATE IN PRIMARY CARE PROFESSIONAL DEVELOPMENT		
Comply with all the requirements of state and local jurisdictions regulating the practice of physical therapy.	91	99
Abide by the American Physical Therapy Association's Physical Therapy Practice Guidelines and Professional Code of Ethics.	100	100
Serve as primary care physical therapy clinical instructor to interns, residents, and/or staff.	70	56
Serve as primary care physical therapy consultant to health care institutions, payers, and policy makers.	33	18
Perform case management (e.g., determining the need for professional service, coordinating care between employer and health care provider) for an insurance payer or provider network.	25	16

* Significant differences between the two groups. (chi square analysis, $p<.001$)

Table 4 (Cont'd).
Percent of Physical Therapists Performing Professional Responsibilities for the Primary Care Group (PCG) and Control Group (CG)

	Percent	
IX. PARTICIPATE IN COMMUNITY HEALTH EDUCATION	**PCG**	**CG**
Plan, implement, and coordinate effective health education programs to enhance and maintain health lifestyles.	73*	30*
Develop, implement, and monitor effectiveness of programs designed to reduce work-related injuries.	50	23
Develop and implement programs where exercise is a known element in risk factor modification (e.g., cardiovascular disease, diabetes, depressive disorders, low back pain, and postpartum complications).	75	40
Evaluate effectiveness of health education programs in addressing recognized needs in the community.	35	17

* Significant differences between the two groups. (chi square analysis, $p<.001$)

Table 5.
Professional Responsibilities[+] Identified as Highly to Extremely Important (59 of 65 items) by the Primary Care Group (PCG) Compared to the Control Group (CG)

	Mean Importance++	
CONDUCT EXAMINATION	**PCG**	**CG**
OBTAIN HISTORY		
Identify the patient's major problem (s) and/or concern (s).	3.9	3.8
"Obtain the patient's description of their current functional limitations…"	3.8	3.7
"Determine the area…aggravating/easing factors, and history of presenting symptoms."	3.7	3.4
Determine the patient's normal level of physical activity and functional capacity.	3.5	3.6
"Obtain the patient's description of any disability…"	3.2	3.2
"Identify the patient's expectations, perceptions, and goals for physical therapy."	3.2	3.3
Assess the patient's/client's communication ability, affect, and learning style.	2.8	3.2
"Determine the patient's mental status and psychological function…"	2.7	3.1
PERFORM SYSTEMS REVIEW		
"Discern signs and symptoms that suggest medical disease…"	3.7	3.2
"Identify prevention needs…of the patient/client."	3.5	3.6
"Identify co-existing health problems…"	3.4	3.1
Identify current medications and their implications for physical therapy intervention.	3.3	3.0
"Conduct a review of systems…"	2.6	2.6

+ Description may be paraphrased for brevity from actual item (see Table 4 for actual item description)
++ On a scale of 0-4, where 0=Not important at all, and 4=Extremely important.
* Significant differences between the two groups. (chi square analysis, $p<.001$)

Table 5 (Cont'd).
Professional Responsibilities[+] Identified as Highly to Extremely Important (59 of 65 items) by the Primary Care Group (PCG) Compared to the Control Group (CG)

	Mean Importance++	
USE TESTS AND MEASURES	**PCG**	**CG**
"...administer P.E. procedures that to verify...suspected medical conditions."	3.7*	3.3*
"Consult with other practitioners...to interpret tests and measures..."	3.7	3.1
"...administer P.E. procedures determining cause of the loss of function..."	3.6	3.3
"Identify...signs potentially arising from visceral structures..."	3.3*	2.6*
"Select and order imaging procedures...(e.g., radiographs, MRI, CT scans)."	3.3*	2.1*
"Select and order non-imaging examination procedures..."	2.8*	2.0*
"Determine the measurement characteristics...of tests..."	2.5	2.1
"Select and order laboratory tests..."	2.4*	1.5*
PERFORM EVALUATION		
"Perform evaluation of patients...with or without referral from a physician..."	3.9	3.7
"Determine the need for referring the patient...to another... practitioner."	3.9	3.4
Determine the patient's/client's ability to benefit from physical therapy.	3.8	3.7
"Perform evaluation of patients with *acute disease and disability*..."	3.8	3.6
"Determine the...physical impairments, functional limitations, and disabilities..."	3.6	3.3
"Perform...evaluation of patients with *chronic disease and disability*..."	3.5	3.6
Determine the need for extremity bracing, splinting, or casting.	3.2	3.2
DETERMINE DIAGNOSIS		
"Establish a physical therapy diagnostic or syndrome classification label..."	3.7*	2.8*
"Determine the diagnostic code...most appropriate for each patient."	3.0	2.5

+ Description may be paraphrased for brevity from actual item (see Table 4 for actual item description)
++ On a scale of 0-4, where 0=Not important at all, and 4=Extremely important.
* Significant differences between the two groups. (chi square analysis, $p<.001$)

Table 5 (Cont'd).
Professional Responsibilities[+] Identified as Highly to Extremely Important (59 of 65 items) by the Primary Care Group (PCG) Compared to the Control Group (CG)

	Mean Importance++	
	PCG	**CG**
DETERMINE PROGNOSIS		
"Design the physical therapy intervention…based on the examination…data."	3.9	3.9
"Determine the degree to which intervention is likely to achieve…goals…"	3.6	3.5
PERFORM INTERVENTION		
"Administer…cardiopulmonary emergency procedures when necessary…"	3.5	3.1
"Develop and provide primary preventive interventions…"	3.3	3.0
"Develop and provide secondary preventive interventions…"	3.3	2.9
"Develop and provide tertiary preventive interventions…"	2.8	2.6
"Prescribe and/or administer over-the-counter medications…"	2.7*	1.2*
"Prescribe and/or administer non-narcotic medications…"	2.4*	1.1*
PLAN DISCHARGE		
"Educate the patient/client…about the…plan of care."	3.6	3.7
"…provide recommendations for return-to-work status for patients."	3.5	3.1
Provide for appropriate post discharge, follow-up, or referral.	3.2	3.2
"Manage the coordination of care…"	3.1	3.3
"Facilitate the continuity of care…"	3.1	3.3

+ Description may be paraphrased for brevity from actual item (see Table 4 for actual item description)
++ On a scale of 0-4, where 0=Not important at all, and 4=Extremely important.
* Significant differences between the two groups. (chi square analysis, $p<.001$)

Table 5 (Cont'd).
Professional Responsibilities[+] Identified as Highly to Extremely Important (59 of 65 items) by the Primary Care Group (PCG) Compared to the Control Group (CG)

	Mean Importance+	
	PCG	**CG**
MEASURE OUTCOMES		
"Determine patient/client satisfaction..."	3.2	3.0
Use outcome to monitor quality of care delivered.	3.2	2.9
"Develop...research proposals for measuring the effectiveness of PCPT."	3.2	2.7
"Design, conduct, analyze, and disseminate research..."	3.0	2.6
"Implement region-specific and disease-specific outcome measures..."	2.9	2.5
"Develop...evidence-based measures...for early intervention."	2.9	2.5
"Determine costs associated with physical therapy interventions..."	2.8	2.5
"Implement general health outcome measures..."	2.7	2.5
"Use outcomes to monitor overall medical costs..."	2.6	2.4
PARTICIPATE IN PRIMARY CARE PROFESSIONAL DEVELOPMENT		
"Abide by the APTA's...Practice Guidelines and Professional Code of Ethics."	3.8	3.9
"Comply with all the requirements of state and local jurisdictions..."	3.7	3.9
"Serve as primary care physical therapy clinical instructor..."	3.5	3.2
"Serve as primary care physical therapy consultant..."	3.0	2.8
"Perform case management...for an insurance payer or provider network."	2.6	2.6
PARTICIPATE IN COMMUNITY HEALTH EDUCATION		
"Develop and implement programs...in risk factor modification..."	3.2	3.2
"Plan, implement, and coordinate effective health education programs..."	3.1	2.8
"Develop...programs designed to reduce work-related injuries."	3.0	3.0
"Evaluate effectiveness of health education programs..."	2.7	2.7

+ Description may be paraphrased for brevity from actual item (see Table 4 for actual item description)
++ On a scale of 0-4, where 0=Not important at all, and 4=Extremely important.
* Significant differences between the two groups. (chi square analysis, $p<.001$)

Analysis of Performance and Importance Ratings for Procedures

Respondents were asked to indicate whether they performed the procedures in physical therapy practice as listed in Table 6. The percentage of respondents answering "yes" for each individual task under the major procedure areas is given by group. There were six procedures that had significantly different responses from the two groups. The procedures that were significantly different between the two groups involve ordering tests, devices, imaging, as well as prescribing and/or administering medications. Additionally, responses to two items relating to ordering imaging procedures revealed marked differences between the two groups. These procedures were, "Order plain film radiographs", and "Order bone scans, MRI, or CT scans". Seventy-three percent of PCPTs ordered plain film radiographs compared to only 2% of non-PCPTs. Forty-one percent of PCPTs ordered bone scans, MRI or CT scans compared to only 2% of non-PCPTs.

Mean importance ratings were again computed for each item. Twenty-nine of 52 (56%) items were rated as either highly important (17 items) or extremely important (12 items). The data is summarized in Table 7. Again, the items were ranked in order of importance for the PCG. There were twelve procedures rated by the PCG as extremely important (mean=3.5-4.0). There were four items that had significantly different responses from the primary care and control groups. Major differences (greater than one point mean difference) in importance were revealed with regard to ordering imaging procedures. PCPTs rated the ordering of plain film radiographs to be a highly important procedure (mean=3.4) compared to non-PCPTs who rated it as moderately important (mean=1.8). The ordering of bone scans, MRI, or CT scans were also rated to be highly important procedures (mean=3.0) compared to non-PCPTs who rated them as moderately important (mean=1.9).

Table 6.
Percent of Physical Therapists Performing Procedures for the Primary Care Group (PCG) and Control Group (CG)

	Percent	
PART II: PROCEDURES **I. EVALUATION PROCEDURES** **A. OBTAIN HISTORY**	**PCG**	**CG**
Mental function examination (e.g., arousal, attention, and cognition tests).	65	78
Identification of patient's primary and secondary problems/concerns.	100	96
Symptom behavior questioning.	96	90
B. PERFORM PHYSICAL EXAMINATION		
Review of systems (e.g., cardiovascular, pulmonary, endocrine, gastrointestinal, urogenital, nervous, integumentary, and psychological).	72	73
Aerobic capacity and endurance.	50	63
Anthropometric characteristics.	55	46
Auscultation tests (e.g., heart, lungs, bruits).	21	21
Biomechanical examination of the upper or lower quarter (e.g., muscle imbalances, functional strength, gait, intersegmental biomechanical relationships).	99	95
Posture assessment.	99	98
Cranial nerve function.	60	50
Environmental, home, and work (job/school/play) barriers assessment.	68	82
Ergonomics and body mechanics observation.	96	87
Integumentary condition.	76	77
Joint capsule and ligament function.	100	90
Neurological status examination (e.g., sensation, segmental muscle tests, reflexes, proprioception).	100	97
Neuromotor development and sensory integration.	58	71
Pain assessment.	100	98
Percussion tests (e.g., bony and soft tissues, cavities).	60	29
Assistive and adaptive device requirements.	91	93
Orthotic, protective, and supportive device requirements.	95	91

* Significant differences between the two groups. (chi square analysis, $p<.001$)

Table 6 (Cont'd).
Percent of Physical Therapists Performing Procedures for the Primary Care Group (PCG) and Control Group (CG)

	Percent	
	PCG	**CG**
Prosthetic requirements.	37	68
Regional musculoskeletal examination (e.g., joint ROM, joint accessory motion, movement/pain relationships, muscle flexibility, muscle strength, nerve tension, spinal segmental motion).	100	98
Self-care and home management (including ADL and Instrumental ADL).	82	84
Vascular status examination (including peripheral and central pulses).	85	63
Ventilation, respiration (gas exchange), and circulatory function.	25	25
Vestibular function.	44	56
C. EXAMINATION / CONSULTATION REQUESTS		
Order assistive and adaptive devices.	88	81
Order orthotic, protective, and supportive devices.	93	81
Order prosthetic devices.	20*	45*
Order laboratory tests and procedures.	29*	3*
Order plain film radiographs.	73*	2*
Order bone scans, MRI or CT scans.	41*	2*
II. PERFORM INTERVENTION		
Administer basic cardiac life support (BCLS) in cardiopulmonary emergency situations.	91	64
Administer advanced cardiac life support (ACLS) collaboratively as a team with other emergency health care professionals (e.g., physicians, nurses, respiratory therapists).	14	15
Prescribe and/or administer over-the-counter medications for neuromusculoskeletal conditions.	54*	6*
Prescribe and/or administer non-narcotic medications for neuromusculoskeletal conditions.	39*	4*
Perform case management.	39	45
Perform discharge planning.	77	87

* Significant differences between the two groups. (chi square analysis, $p<.001$)

Table 6 (Cont'd).
Percent of Physical Therapists Performing Procedures for the Primary Care Group (PCG) and Control Group (CG)

	Percent	
	PCG	**CG**
Prescription, application, and as appropriate, fabrication, of devices and equipment (assistive, adaptive, orthotic, protective, and supportive).	84	74
Prescription, application, and as appropriate, fabrication, of prosthetic devices and equipment.	31	35
Administer, monitor response, and modify cardiopulmonary/cardiovascular rehabilitation.	31	37
Administer, monitor response, and modify neuromuscular rehabilitation.	91	91
Prescribe and/or administer, monitor response, and modify therapeutic exercise.	99	97
Perform posture and ergonomic instruction.	100	93
Administer, monitor response, and modify physical agents (e.g., US, heat, cold).	97	92
Administer, monitor response, and modify mechanical modalities (e.g., CPM, traction).	97	82
Administer, monitor response, and modify electrotherapeutic modalities (e.g., biofeedback, iontophoresis, NMES).	95	79
Perform wound management (including debridement procedures).	57	48
Perform manual therapy (including mobilization and manipulation procedures).	95	83
Prescribe and/or administer, monitor response, and modify functional training in self-care and home management (including ADL and Instrumental ADL).	73	71
Prescribe and/or administer, monitor response, and modify functional training in community and work (job/school/play) integration or reintegration (including Instrumental ADL, work hardening, and work conditioning).	55	52
Perform airway clearance technique (e.g., chest percussion, vibration, and shaking, pulmonary postural drainage and positioning).	12	21

* Significant differences between the two groups. (chi square analysis, $p<.001$)

Table 7.
Procedures[+] Identified as Highly to Extremely Important (29 of 52 items) by the Primary Care Group (PCG) Compared to the Control Group (CG)

	Mean Importance++	
EVALUATION PROCEDURES	**PCG**	**CG**
Obtain History		
Identification of patient's primary and secondary problems/concerns.	3.6	3.5
Symptom behavior questioning.	3.6	3.3
Mental function examination (e.g., arousal, attention, and cognition tests).	2.9	3.2
PERFORM PHYSICAL EXAMINATION		
"Regional musculoskeletal examination..."	3.9	3.8
Joint capsule and ligament function.	3.7	3.4
"Neurological status examination..."	3.7	3.4
"Biomechanical examination of the upper or lower quarter..."	3.6	3.7
Posture assessment.	3.5	3.6
"Self-care and home management..."	3.3	3.4
Pain assessment.	3.3	3.4
Orthotic, protective, and supportive device requirements.	3.2	3.5
Ergonomics and body mechanics observation.	3.2	3.4
"Review of systems..."	3.1	3.0
EXAMINATION / CONSULTATION REQUESTS		
Order plain film radiographs.	3.4*	1.8*
Order orthotic, protective, and supportive devices.	3.3	3.3
Order assistive and adaptive devices.	3.2	3.3
Order bone scans, MRI, or CT scans.	3.0*	1.9*
Order prosthetic devices.	2.7*	3.0*
Order laboratory tests and procedures.	2.5*	1.7*

+ Description may be paraphrased for brevity from actual item (see Table 6 for actual item description)
++On a scale of 0-4, where 0=Not important at all, and 4=Extremely important.
* Significant differences between the two groups. (chi square analysis, $p<.001$)

Table 7 (Cont'd).
Procedures[+] Identified as Highly to Extremely Important (29 of 52 items) by the Primary Care Group (PCG) Compared to the Control Group (CG)

	Mean Importance++	
	PCG	**CG**
PERFORM INTERVENTION		
"Prescribe...monitor response, and modify therapeutic exercise."	3.9	3.8
"Administer basic cardiac life support..."	3.8	3.6
"Perform manual therapy..."	3.7	3.5
Perform posture and ergonomic instruction.	3.6	3.6
Administer, monitor response, and modify neuromuscular rehabilitation.	3.5	3.6
"Administer, monitor response, and modify mechanical modalities..."	3.4	3.3
"Administer...and modify electrotherapeutic modalities..."	3.4	3.2
"Administer, monitor response, and modify physical agents..."	3.3	3.3
"...administer, monitor response, and modify functional training..."	3.2	3.3
"Prescription, application, and...fabrication, of devices and equipment..."	3.1	3.2

+ Description may be paraphrased for brevity from actual item (see Table 6 for actual item description)
++On a scale of 0-4, where 0=Not important at all, and 4=Extremely important.
* Significant differences between the two groups. (chi square analysis, $p<.001$)

Analysis of Importance Ratings for Knowledge Areas

Mean importance ratings were computed for each item from the "Knowledge Areas" section of the survey instrument. The means of individual items under each dimension were ranked in order of importance for the PCG. Data is summarized in Table 8. For Knowledge Areas, 41 of 54 items (76%) were rated as either highly important (17 items) or extremely important (24 items). There were sixteen knowledge areas that had statistically significant differences between the primary care and control groups. The PCG rated these areas as highly important to extremely important in primary care. Nine of these sixteen knowledge areas revealed major differences (greater than one point mean difference) between the two groups. These were: "Interactive effects of commonly used medications...", "Basic prescription writing elements...", "General principles of diagnostic imaging procedures.", "Scientific methodology...", "Basic radiologic anatomy...", "Principles for ordering diagnostic imaging...", "Methods for accessing and critically appraising...", "Application of research findings...", and "Methods for participating...". The major differences in knowledge areas appear to be necessary to perform some of the responsibilities that showed significant differences, such as "ordering" and "prescribing," found in Tables 4 and 5, and the differences in procedures found statistically significant shown in Tables 6 and 7.

Table 8.
Knowledge Areas Identified as Highly to Extremely Important (41 of 54 items) by the Primary Care Group (PCG) Compared to the Control Group (CG)

	Mean Importance+	
ANATOMY AND PHYSIOLOGY	**PCG**	**CG**
Musculoskeletal system	4.0	4.0
Nervous system	3.9	3.9
Cardiovascular system	3.4	3.5
Pulmonary system	3.2	3.3
Skin/Integumentary system	3.1	3.2
Endocrine system	2.5	2.4
EXAMINATION, EVALUATION, DIAGNOSIS, AND PROGNOSIS		
Physical examination procedures for evaluating acute musculoskeletal trauma.	3.9	3.7
Differential diagnosis of musculoskeletal disorders (e.g., differentiating tendon vs. ligament vs. nerve disorder).	3.9*	3.8*
Biomechanical abnormalities commonly related to musculoskeletal pain and dysfunction.	3.9	3.7
Signs and symptoms of medical conditions/diseases that mimic musculoskeletal disorders.	3.8*	3.5*
Patient/client interview skills (e.g., focus and following, reflective statements, inquiry, confrontation, enlisting cooperation).	3.8	3.7
Expected outcomes following physical therapy intervention for common musculoskeletal disorders.	3.8*	3.4*
Communication processes between health care practitioners when discussing patient-related data (e.g., effective verbal and written communication, patient confidentiality assurances, electronic media use).	3.8	3.6
Assessment of strength, flexibility, endurance, and coordination fitness.	3.7	3.8
Physical examination for evaluating the central and peripheral nervous system.	3.6	3.3
Signs and symptoms of cardiovascular disease (including risk factor modification).	3.4	3.2
Physical examination procedures for abdominal and chest cavities (e.g., lung sound auscultation, abdominal organ palpation).	2.5*	1.9*

+ On a scale of 0-4, where 0=Not important at all, and 4=Extremely important.
* Significant differences between the two groups. (chi square analysis, $p<.001$)

Table 8 (Cont'd).
Knowledge Areas Identified as Highly to Extremely Important (41 of 54 items) by the Primary Care Group (PCG) Compared to the Control Group (CG)

	Mean Importance+	
INTERVENTION	**PCG**	**CG**
Therapeutic exercise.	3.9	3.8
Basic cardiac life support (BCLS).	3.8	3.6
Manual therapy for joint and soft tissue mobilization.	3.7	3.5
Prevention of common musculoskeletal conditions.	3.6	3.5
Neuromuscular re-education for proprioceptive/cognitive deficits.	3.4	3.6
Physical agents.	3.3	3.2
Community education consisting of primary care prevention and wellness programs for commonly occurring physical disablement (e.g., obesity, falls, back pain, repetitive strain injuries).	3.2	3.0
Extremity bracing, casting, and splinting.	3.0	2.9
Taping techniques.	2.9	2.7
Work hardening/conditioning programs.	2.8	3.0
CLINICAL PHARMACOLOGY		
Rationale and clinical indications for commonly used medications (e.g., analgesics, anti-inflammatory, muscle relaxants, anti-hypertensives, diuretics) in patients presenting to physical therapy with common neuromusculoskeletal and medical conditions.	3.6*	3.0*
Contraindications of commonly used medications in patients presenting to physical therapy with common neuromusculoskeletal and medical conditions.	3.6*	3.2*
Interactive effects of commonly used medications in patients presenting to physical therapy with common neuromusculoskeletal and medical conditions.	3.5*	2.8*
Basic prescription writing elements (e.g., dosage, timing) of analgesics and anti-inflammatory drugs.	3.3*	1.8*

+ On a scale of 0-4, where 0=Not important at all, and 4=Extremely important.
* Significant differences between the two groups. (chi square analysis, $p<.001$)

Table 8 (Cont'd).
Knowledge Areas Identified as Highly to Extremely Important (41 of 54 items) by the Primary Care Group (PCG) Compared to the Control Group (CG)

	Mean Importance+	
DIAGNOSTIC IMAGING SCIENCES	**PCG**	**CG**
Basic radiologic anatomy and common radiologic abnormalities of the spine and extremities.	3.7*	2.6*
General principles of diagnostic imaging procedures.	3.5*	2.4*
Principles for ordering diagnostic imaging (e.g., plain film radiographs, CT scans, MRI, bone scans).	3.4*	1.8*
Scientific methodology of measurement characteristics (e.g., sensitivity and specificity) of diagnostic imaging procedures.	3.0*	1.8*
CRITICAL INQUIRY		
Application of research findings to primary care physical therapist practice and education.	3.5*	2.9*
Methods for accessing and critically appraising current relevant literature (e.g., using computer to access Medline, Cochrane Library).	3.4*	2.7*
Critical analysis of scientific literature (e.g., research design, sampling, reliability, data analysis, validity).	3.3*	2.7*
Methods for participating in designing and conducting clinical, basic, or applied research.	3.0*	2.2*
ETHICAL AND LEGAL CONSIDERATIONS		
Professional standards and ethical guidelines.	3.9	3.9
Scope of practice of health care disciplines.	3.8	3.8
State and local practice laws.	3.8	3.8

+ On a scale of 0-4, where 0=Not important at all, and 4=Extremely important.
* Significant differences between the two groups. (chi square analysis, $p<.001$)

A final summary of the key differences between the primary care and control groups are shown in Tables 9, 10, and 11. These major differences include four responsibilities, two procedures, and nine knowledge areas.

Table 9.
Key Differences between the Primary Care Group (PCG) and Control Group (CG) for Professional Responsibilities

PART 1: PROFESSIONAL RESPONSIBILITIES	PCG %	CG %	PCG Mean+	CG Mean+
Select and order imaging procedures needed to obtain information about patient's current medical condition (e.g., radiographs, MRI, CT scans).	74	5	3.3	2.1
Identify abnormalities and signs potentially arising from visceral structures of the head, neck, chest, abdomen, and pelvis while performing the musculoskeletal examination.	85	58	3.3	2.6
Establish a physical therapy diagnostic or syndrome classification label encompassing a cluster of signs and symptoms (e.g., patellofemoral pain syndrome, lumbar derangement syndrome), whenever possible.	98	69	3.7	2.8
Prescribe and/or administer over-the-counter medications, when indicated, for patients presenting to physical therapy with neuromusculoskeletal conditions/dysfunctions.	56	7	2.7	1.2

+ On a scale of 0-4, where 0=Not important at all, and 4=Extremely important.

Table 10.
Key Differences between the Primary Care Group (PCG) and Control Group (CG) for Procedures

PART II: PROCEDURES	PCG %	CG %	PCG Mean+	CG Mean+
Order plain film radiographs.	73	2	3.4	1.8
Order bone scans, MRI, or CT scans.	41	2	3.0	1.9

+ On a scale of 0-4, where 0=Not important at all and 4=Extremely important.

Table 11.
Key Differences between the Primary Care Group (PCG) and Control Group (CG) for Knowledge Areas

PART III: KNOWLEDGE AREAS	PCG Mean+	CG Mean+
Interactive effects of commonly used medications in patients presenting to physical therapy with common neuromusculoskeletal and medical conditions.	3.5	2.8
Basic prescription writing elements (e.g., dosage, timing) of analgesics and anti-inflammatory drugs.	3.3	1.8
General principles of diagnostic imaging procedures.	3.5	2.4
Scientific methodology of measurement characteristics (e.g., sensitivity and specificity) of diagnostic imaging procedures.	3.0	1.8
Basic radiologic anatomy and common radiologic abnormalities of the spine and extremities.	3.7	2.6
Principles for ordering diagnostic imaging (e.g., plain film radiographs, CT scans, MRI, bone scans).	3.4	1.8
Methods for accessing and critically appraising current relevant literature (e.g., using computer to access Medline, Cochrane Library).	3.4	2.7
Application of research findings to primary care physical therapist practice and education.	3.5	2.9
Methods for participating in designing and conducting clinical, basic, or applied research.	3.0	2.2

+ On a scale of 0-4, where 0=Not important at all, and 4=Extremely important.

DISCUSSION

Although the *Guide to Physical Therapist Practice*[31] has outlined the role of primary care, a practice analysis that defined the role and function of physical therapists in the primary care arena has never been performed. The results of this study provide useful data for defining the role and function of physical therapists in primary care. The study demonstrates that a physical therapist working in the

primary care field needs to possess an advanced level of knowledge, skills, and abilities necessary to practice primary care and remain competent. This survey has implications for PCPTs, continuing education providers, and possibly, for future modifications of the *Normative Model of Physical Therapist Professional Education (www.apta.org).*

Despite the 45-minute time it took to complete the survey, the relatively high response rate of 56.1% from the PCG might be attributed to personal commitment provided by each member of the group, high credibility of the survey instrument provided by the well-respected NAC, extensive advertisement of the research study, and a high interest in the subject area. The moderate, but unexpectedly, high response rate of 41.2% from the CG was possibly attributed to the perceived credibility of the research study and a high interest in the subject area. A special effort was made to ensure that all returned surveys were fully completed by the respondents by stressing in the instructions that it was essential for the respondents to rate the level of importance of each task in the survey instrument.

Although the study revealed several statistically significant differences between the two groups, the actual differences were often small. Either the majority of respondents from each group already perform the tasks, or only a small number of respondents from each group perform the tasks. However, four professional responsibilities, two procedures, and nine knowledge areas were identified as highly important by the PCPTs when compared to the non-PCPTs. For example, identifying abnormalities and signs of non-musculoskeletal conditions, ordering imaging studies, establishing a physical therapy diagnosis, and prescribing OTC medications are tasks that were identified as specifically important in the practice of primary care (Tables 9 and 10). PCPTs consider it extremely important to establish a physical therapy diagnosis that dictates the appropriate physical therapy intervention. Additionally, nine knowledge areas that relate to these tasks were identified by PCPTs as highly importantly when compared to non-PCPTs (Table 11). Four of these nine knowledge areas were rated extremely important by the respondents in the PCG. These tasks include interactive effects of pharmacologic medications, principles of diagnostic imaging, common radiologic abnormalities of the musculoskeletal system, and application of research findings.

PCPTs in the military, who are credentialed to function in the primary care provider role, frequently order imaging studies to screen for pathologic conditions, and prescribe pre-approved

medications to reduce acute inflammatory conditions of the neuromusculoskeletal system.[11,12] This practice pattern is also seen in England where physical therapists function in an extended scope of practice.[10,16] In contrast, PCPTs in the civilian sector are prohibited by state practice acts from ordering imaging studies or prescribe medications. Perhaps this may partly explain the low ratings given by the CG for some of these tasks. It is imperative to be clear that the goal in doing any of these tests is not so much to make a diagnosis of medical disease as to use the tests as a method of determining whether the patient is appropriate for physical therapy intervention or whether the patient should be referred for further medical evaluation. [11,12] Increased autonomy of judgment and making independent clinical decisions bring with it a higher level of responsibility and accountability.

The practice of physical therapy in primary care is evolving, and current competencies in this field will be supplemented and modified. Some skills currently identified as being at the advanced level may become entry-level skills, and new skills requiring advanced knowledge and clinical proficiency will no doubt emerge. The role of the PCPT practitioner is dynamic; consequently, the competencies in primary care will be continually changing. Therefore, a revalidation of the competencies is warranted in the future.

CONCLUSION

The purpose of this study was to describe the professional responsibilities, procedures, and knowledge areas of physical therapists working in the primary care setting. The major differences in clinical competencies between the PCPTs and non-PCPTs were in the areas of identifying signs and symptoms of non-musculoskeletal conditions, establishing physical therapy diagnoses, ordering imaging procedures, and prescribing OTC medications.

The results of this study provide evidence that PCPTs have unique knowledge, skills, and abilities when comparing to non-PCPTs; provide useful data for defining the role and function of physical therapists in primary care; and provide curricular direction to professional, post-professional, and clinical residency or fellowship-based educational settings.

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APPENDIX A

Literature Review

Primary Care Physical Therapy: A Historical Perspective of the Emergence of Primary Care Physical Therapists in the Physical Therapy Profession

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Physical therapists have traditionally practiced in a prescriptive role in the medical arena. That is, a referring physician would have to write a physical therapy prescription, including the patient's diagnosis, prior to the patient being treated by the physical therapist. In the prescription, the physician would order the appropriate physical therapy intervention prior to the physical therapist providing the service. In other words, it was a known legal practice for physicians to evaluate, diagnose, and determine the specific physical therapy intervention needed for the patient. Thus, physical therapists were functioning as mere technicians and were not allowed, by state law, to function in an independent or evaluative role. This practice has changed over the years.

Currently, there are 47 states that allow direct access to physical therapy services. Thirty-four of these states allow direct access through state practice act omissions and provisions. Thirteen other direct access states allow only examination and evaluation. The American Physical Therapy Association's (APTA) Vision 2020 regards direct access to physical therapy as one of its goals and will seek full direct access legislation in all 50 states during the years ahead. With constant changes to our health care delivery service, there has been a paradigm shift towards a new practice area in the delivery of physical therapy services: primary care. The emergence of this unique practice area necessitates a practice analysis study to define the practice of physical therapists in the primary care environment. The purpose of this paper was to review all relevant literature that discusses the utilization of physical therapists beyond the traditional model, in order to ascertain the prevalence of physical therapists practicing in the primary care environment and to explore the physical therapist's role and function.

Key Words: *Physical therapists, Primary care, Musculoskeletal dysfunction.*

Physical therapy, as a profession, has gone through remarkable changes since its early beginning. When one considers the level of autonomy of physical therapy practice today and compares it with how physical therapy was practiced in the 1940's, one can only marvel at the evolution of our profession.

The evolution of physical therapy practice is well documented in the US Army. The first known physical therapists (known then as physiotherapy reconstruction aides) were recruited and trained by Mary McMillan, who was appointed Superintendent of Reconstruction Aides in Physiotherapy by the Surgeon General of the Army to serve during World War I.[1] Historically, the physical therapy profession has functioned in a prescriptive environment. In other words, a referring physician would have to write a physical therapy prescription including the patient's diagnosis prior to physical therapy intervention. It was standard practice for a physician to perform the evaluation and order the appropriate physical therapy procedure/modality and for the physical therapist to provide the service without first independently examining and evaluating the patient.[2] Therefore, the physical therapist functioned merely as a technician.

About 2,000 civilian reconstruction aides served in the Army during World War I. The Bolton Bill of 1944 allowed physical therapists, among other allied health professionals, to be commissioned as officers in the US Army. There were approximately 1,300 physical therapists on active duty in the US Army by August 1945. In 1955, the Women's Specialist Corps (in which physical therapists were included) became known as the Army Medical Specialist Corps, as the number of male physical therapists began increasing.[1] Physical therapists began functioning as nonphysician clinicians (NPCs) when they were assigned to the combat zone during the Vietnam War.

NPCs were health care providers who were either under physician supervision or completely independent. Cooper et al[3] identified ten distinct medical/surgical disciplines which provide independent health care services. Among them are the three "traditional" disciplines: nurse practitioners (NPs), certified nurse-midwives (CNMs), and physician assistants (PAs). Three others are "alternative" or "complementary" disciplines: chiropractors, naturopaths, and practitioners of acupuncture and herbal medicine. The final four are "specialty" disciplines: optometrists (OD), podiatrists (DPM), certified registered nurse anesthetists (CRNAs), and clinical nurse specialists (CNSs). The rapid growth of NPCs is the result of three new dynamics affecting NPCs.[3-10] First, changes in state laws and regulations are enhancing the practice prerogatives of NPCs. Second, the market is creating new opportunities for NPCs to

engage in clinical practice, and third, the number of NPCs being trained is growing. Through statutes and regulations, states have granted practice prerogatives to NPCs in each of these disciplines. First among these prerogatives is licensure, which establishes their right to practice, although it does not assure their autonomy as practitioners.[3,10]

Military physical therapists, who are credentialed as primary health care providers under physician supervision, are allowed to perform early evaluation and treatment of patients with neuromusculoskeletal (NMS) conditions without a physician's referral.[1] As a result, these physical therapists freed orthopaedic surgeons, who were in short supply, from performing basic and simple NMS evaluations and enabled them to concentrate more on patients that required surgical management. Physical therapists were given expanded privileges commensurate with their training and experience. For example, physical therapists in the US Army were allowed to order radiographic imaging, order and prescribe pharmacologic agents, confine patients to their quarters for up to 72 hours, and refer patients to other health care providers for consultations.[11] These expanded privileges allowed physical therapists to function in a more independent role and to safely perform their duties.[1] James and Abshier[12] evaluated the impact of musculoskeletal screening and confirmed that the neuromusculoskeletal (NMS) evaluation program at Darnall Army Hospital in Fort Hood, Texas was efficient, effective, and acceptable. In this study, physical therapists preferred the expanded privileges. James and Stuart[2] screened 2,296 patients with back injuries in two Army hospitals to evaluate the feasibility of physical therapists as primary "screener" for patients with low back pain. They concluded that patients screened by physical therapists receive more expeditious treatment than those who entered through other entry points in the medical care system. The study also concluded that patients prefer direct access to physical therapy services. Job satisfaction was high among the physical therapists, and 14 out of 14 orthopaedic surgeons felt that the physical therapists were qualified to screen low back pain and that the program should be permanently established with the exception of pediatric and geriatric populations. As early as 1970, Worthingham[13] confirmed that physical therapists possess in-depth knowledge, initiative, and judgment qualities which prepared them to function in an evaluative role prior to providing treatments. In 1974, Johnson[14] reported that the role of physical therapists, as it was generally known then, would "disappear to be replaced by an expanded role which will include evaluation, assessment, and initiation of a treatment program."

A randomized controlled trial evaluated the effectiveness and cost effectiveness of specially trained physical therapists in the assessment and management of defined referrals to hospital orthopaedic departments.[15] These physical therapists are as effective in the initial assessment and management of new referrals as post-Fellowship junior staff and clinical assistant orthopaedic surgeons, and generated lower initial direct hospital costs. Of special interest is the fact that physical therapists are less likely to order radiographs and less likely to refer to orthopaedic surgery than are the junior doctors. Byles and Ling[16] concluded that an experienced physical therapist can manage between 40-60% of orthopaedic referrals. In this study, 89% of the patients were satisfied with the direct access services rendered. Hattam and Smeatham[29] confirmed that physical therapists with an extended scope of practice demonstrate successful management of 72.4% of the patients within primary care.

Presently, with most of the health care provided in the United States at the primary care level, there appears to be a trend in the physical therapy profession toward providing physical therapy services in the primary care setting. Primary care was recognized as an entry point to health care by the 1995 APTA House of Delegates,[17] with two policies passed on this subject. The first policy (RC 14-95) states that, "a physical therapist is an appropriate health professional for persons seeking entry into the health care system for NMS dysfunction." The second policy (RC 23-95) states that, "physical therapists are primary care providers who, as individuals or members of primary care teams, may make unique contributions to people with NMS dysfunction."

It has been demonstrated, in military and civilian settings in the United States, and civilian settings in England and Australia, that physical therapists can be successful in providing physical therapy services in the primary care setting.[1,11,18-27,29] For instance, in England, the trend toward primary care-based physical therapy services in general practice is evident. This is driven by the government's emphasis on health promotion and on caring for patients in the community. Studies have shown that patients prefer to be seen in the primary care setting and require fewer treatment sessions in this setting. This is associated with decreased overall cost. Early access to primary care physical therapy (PCPT) reduces the costs of prescribed medications and less time is lost from work and normal duties.[23-27]

A randomized trial[24] that compared PCPT clinics and traditional hospital-based physical therapy found that patients who are able to work and are independent in all activities of daily living (ADL) display

some statistically significant improvements when they receive education and advice in the primary care setting compared to the hospital-based setting. The majority of general practitioners (GPs) surveyed also show favorable attitudes toward the concept of holding education and advice clinics in primary care practice. The findings support the concept that primary care-based physical therapy services would lower health care costs.[19] A study of physical therapy private practitioners in Victoria, Australia shows that primary care is a significant part of their physical therapy practice and confirms that physical therapy treatment decisions are left to the therapist.[20] Simpson[26], who studied the referral patterns among general medical practitioners in Queensland, Australia, concluded that 95% of general medical practitioners in the private practice setting consider physical therapists to be legitimate health care providers within the health care delivery system, 63% of respondents approve of physical therapists as primary care providers, and 99% of respondents consider physical therapist practitioners to be ethical and professional.

Present day physical therapists are called upon to examine, evaluate, diagnose, prognosticate, and treat patients with cardiopulmonary and neuromusculoskeletal dysfunction. Physical therapists provide treatment to patients with neuromusculoskeletal impairments, and functional limitations resulting from injury, disease, or other causes that lead to disabilities or changes in health condition.[30] They are trained to screen and perform differential diagnoses to determine whether a patient is a candidate for physical therapy or requires a referral to another health care professional, when it is outside the scope of their practice.[1,2,11,12,29] It is these skills that position physical therapists as primary care providers.

When discussing physical therapists in primary care, it is necessary to bring up the issue of direct access. Direct access is defined as the evaluation and treatment of patients by physical therapists without referral from a physician or other health care practitioner.[31] The APTA issued a statement in the September 1994 Statement on Health Care Reform regarding access to physical therapy services. Access to care was regarded as a highly important issue, particularly, direct access to physical therapists. Other important issues addressed inclusion of physical therapists as entry points into managed care systems relative to coordination and provision of habilitative and rehabilitative care.[32] In November 2000, the APTA Board of Directors adopted a new definition for direct access: the legal right for the public to directly access physical therapists for examination, evaluation, and intervention without the requirement of a physician referral.[33] In 1957, Nebraska was the first state to establish direct access to physical therapy services. As

of June 2001, the Government Affairs Department of the APTA reported that 47 states allow direct access. Of these states, 34 allow direct access with certain omissions and provisions by state statutes. Twelve states allow direct access under omissions, and 22 states allow direct access under provisions. An omission means that no referral language exists in state statute, and provisions refer to certain time frames, years of experience, and select populations. The remaining 13 states only allow partial direct access, defined as the examination and evaluation of patients without referral from a physician.[34] But in this scenario, a physician referral is required if subsequent treatments are necessary.

One of the current goals of the APTA is to seek full direct access legislation in all 50 states. At the June 2000 APTA House of Delegates meeting, Vision 2020 was established which postulates that "in 20 years, patients and clients will have access to physical therapists without any restrictions in all 50 states".[33] On May 30, 2001 the American Legislative Exchange Council (ALEC) Board of Directors approved a resolution on patient access to physical therapists' services without current professional practice restrictions regarding referral, recognizing the benefits that access to physical therapists' services provides to a free-market health care environment (www.ALEC.org). In a study by Crout et al,[35] physical therapists in Massachusetts and Connecticut are equally supportive of direct access (75%) and 34% of respondents in Massachusetts stated that they practiced using direct access. Physical therapists in both states, however, indicated that the most common reasons for limited use of direct access were employer policies and lack of insurance reimbursement. This was also reflected in a study by Domholdt and Durchholz[36] in North Carolina, Nevada, and Utah. Snow et al[37] investigated the public's knowledge of direct access and the role of physical therapists in primary care. Sixty-seven percent of the sample reported they had no knowledge or concept of direct access. Fifty-seven percent had never been to a physical therapist, and 73% would go directly to a physical therapist if they were aware of this option.

In order to fully appreciate the contribution of physical therapy and its utilization by the medical profession, physicians' knowledge of physical therapy and what physical therapists are trained to do is as important as the public's perception. In 1983, Uili et al[38] studied the knowledge of physicians regarding physical therapy services and their impression of what physical therapists were able to do in the United States. The study revealed that physicians who practiced 10 years or more have the most knowledge of physical therapy procedures. When referring patients to physical therapy, 74% of respondents prefer a

prescriptive relationship with physical therapists. Of the physicians surveyed, physical medicine and rehabilitation (PM&R) specialists have the most knowledge of physical therapy procedures on all measures, but also assume the most knowledge, even when incorrect. The role of the PM&R specialist is most similar to that of the physical therapist. This perceived similarity of function may account for PM&R specialists' strong prescriptive tendencies and preference for technical procedures, if they view therapists as potential competitors rather than role enhancers. These research findings support studies by Dunkel[39] and Silva et al[40] that physicians perceive and utilize physical therapists primarily as technicians rather than professional colleagues. Dunkel, who surveyed a group of physicians and physical therapists in Arkansas concerning attitudes toward professional performance of physical therapists, indicates that a large majority of responding physicians believe they do not know enough about physical therapy services and what it can provide for their patients.[37] According to Silva et al,[40] the majority of respondents in a survey of 151 California physicians indicate that a physical therapist's evaluative skills and autonomy of judgment received lower positive response compared to strong motivation, representative organization, and specialized body of knowledge. These physicians prefer a prescriptive relationship rather than a referral or consultation basis.

Medical students also have an inaccurate impression of what physical therapists actually do.[41] A study in 1994 by Maira et al[42] suggests that there is a significant need for a physical therapy component to be established in physician residency education in order for resident physicians to appreciate and understand the importance of physical therapy intervention. Interestingly, most of the physical therapy teaching is provided by physical therapists associated with local hospitals. A similar study by Hale and Schuch[43] reports that physical therapists who have expertise in performing musculoskeletal examinations play a role in the education of medical residents. This article reports on the teaching experience of a physical therapist in a family practice residency and describes her consultative role in the multidisciplinary approach to patient care. In a study by Stanton et al,[44] 54% of resident physician respondents indicate a deficit in their knowledge of physical therapy procedures.

With escalating health care costs, physical therapists are in position to curb unnecessary expenses. Direct access to physical therapy services have cost savings of $1,200 per patient episode of care.[28] First-

contact care, an essential feature of primary care, is associated with reductions in ambulatory episode-of-care expenditures of over 50% in a nationally representative sample.[19]

Physical therapists are assuming increased independence in making patient care decisions. A study of 400 American and 384 Australian physical therapists by May and Dennis[45] reveals that more than half of the therapists consider the physicians' orders to be of limited value, which may reflect the therapists' levels of independence. In another study by Clawson and Domholdt[46] on physician referrals to physical therapists in Indiana, more than 60% of patients referred to physical therapy have no diagnosis. This lack of diagnosis from the referrals is perceived as an indication that physical therapists make independent clinical judgment as to physical therapy intervention.

Physical therapists are working in primary care-based settings in all parts of the country. With military physical therapists leading the way, there are now physical therapists in the civilian sector in California, North Carolina, Minnesota, Tennessee, Montana, and Georgia who practice in the primary care setting.[1,11,18,20,17,27]

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APPENDIX B

August 27, 1999

Dear National Advisory Committee Nominee:

There is a developing paradigm shift towards a new area with regards to the delivery of physical therapy services: primary care. It has been clearly documented, particularly in the Army Medical Specialist Corps and Kaiser Permanente that physical therapists can be successful in providing direct access primary care physical therapy. The premise under this new service model is to get the patient to the most skilled provider at the first point of entry into the health care delivery system. To bring credibility to our profession's role in direct access primary care physical therapy, it is imperative that we first determine the necessary elements of the clinical practice of a physical therapist in the primary care setting. At this time, a practice analysis is being developed to clearly define this unique practice area.

We are undertaking a non-experimental descriptive research study to determine the advanced clinical knowledge, skills, and abilities of physical therapy practitioners who are practicing in the primary care setting. The end result of this study may provide evidence for a unique core body of knowledge required by clinicians practicing with skills in primary care physical therapy (PCPT) and delineate their knowledge and responsibilities from general physical therapists and specialists (OCS, NCS, etc.) in our profession. Identifying this clinical practice is necessary to promote high quality health care and to assist the consumers, the health care community, and the insurance companies in identifying physical therapists with primary care skills. Identifying these competencies may be used as a standard for curriculum design in PCPT residency programs and may also provide the framework for developing a certification process to recognize physical therapists who have achieved advanced clinical competence in the area of primary care.

You have been selected to participate as a subject matter expert for this practice analysis research survey on PCPT which will be conducted as a joint research project by Robert E. DuVall, PT, MPT, OCS, MTC, PCC, CSCS, and Edsen B. Donato, PT, MPT, OCS, CHT, who have already received approval for this project from the Graduate Advisory Committees of the University of St. Augustine, FL, and Loma Linda University, CA, respectively. Please take a moment to answer the following list of questions (see attached form) which will enable us to move forward to establish our first draft of the survey instrument.

Again, the final goal and outcome of this interview is to develop a survey instrument which will identify the unique content and process areas essential to the PCPT practitioner.

Your additional comments or suggestions are encouraged and welcome and you can be assured of complete confidentiality in completing this 5-item questionnaire. Your support and participation is greatly appreciated. We would also be more than happy to answer or clarify any other questions you might have. **Please respond by September 30, 1999.** You may write or call Bob DuVall or Edsen Donato at:

11164 Yardley PL
Loma Linda, CA 92354

Thank you for your consideration.

Sincerely,

Robert E. DuVall, PT, MMSc, OCS, MTC, PCC, CSCS
Phone: (770) 979-1400
Email: robertduvall@sprintmail.com

Edsen B. Donato, PT, MPT, OCS, CHT
Phone: (909) 427-6995
Email: edonato1@aol.com

APPENDIX B

Name/Title:_____

Address:_____

Phone:_____

1) Would you **consent** to be a part of this National Advisory Committee of Subject Matter Experts?

2) Define what Primary Care Physical Therapy (PCPT) is and what it should involve in your own words (one paragraph of approximately not more than 300 words). Please write behind this sheet or attach a new sheet if you need more space.

3) Describe or identify the key content and process areas of knowledge, skills, and abilities for an individual to practice PCPT and identify the requirements this individual needs to possess before practicing PCPT. Please attach a sheet if you need more space.

4) What percentage of your present or previous (recent) clinical practice is PCPT?

5) Identify which of the following provided sample items/competencies you agree with (please refer to attached 2-page form). Underline the sample items/competencies that you feel are important knowledge, skills, and abilities for a PCPT practitioner. You may comment, modify, and/or change the wording of the sentences as necessary.

APPENDIX B

PRIMARY CARE PHYSICAL THERAPY
Proposed Practice Analysis
Survey Items/Competencies

MEDICAL DIAGNOSTICS

A. Implement screening principles for medical conditions.
B. Perform selected examination techniques that will help safeguard the patient who may present with a medical disease.
C. Discern signs and symptoms that suggest disease rather than dysfunction.
D. Determine appropriate physician referrals based on the screening examination.

COMPREHENSIVE EXAMINATION SCHEME

A. Interpret the clinical "red flags" of a subjective and objective examination.
B. Relate normal physiology of the organ systems of the body to a set of general symptoms and signs which suggest the organ system is diseased.
C. Differentiate medical conditions that are or are not appropriate for physical therapy intervention.
D. Identify medical conditions that may modify physical therapy modalities offered to the patient.
E. Identify visceral structures of the abdominal cavity and differentiate them from local musculoskeletal system structures.
F. Perform selected objective tests to screen certain organ systems for disease.
G. Identify conditions that could be easily detected during physical therapy evaluation that should be referred for further medical evaluation.

RADIOLOGY

A. Understand the fundamentals of imaging procedures/modalities.
B. Understand how imaging procedures/modalities are used to solve problems and diagnose patients.
C. Describe basic functional radiologic anatomy of the spine/extremities that relate to physical therapy practice.
D. Identify common radiologic abnormalities of the spine/extremities.
E. Understand the concepts and applications of CT, MRI, PET Scans, and Nuclear Medicine.
F. Describe signs and symptoms that indicate the need for further clinical imaging studies.
G. Determine the appropriateness of selected diagnostic clinical imaging techniques for a given neuromusculoskeletal condition or movement dysfunction.
H. Identify normal/abnormal distinguishing features in clinical imaging studies of pediatric, adult, and geriatric populations.

PHARMACOLOGY

A. Understand the categories of commonly used medications in patients presenting to physical therapy services with neuromusculoskeletal conditions/dysfunctions.
B. Identify the common therapeutic effects and side effects of the commonly used medications.
C. Identify the clinical indications for the drugs frequently encountered in physical therapy practice.
D. Identify commonly prescribed pain and anti-inflammatory mediations interacting with other medications.

LAB VALUES AND NUTRITION

A. Identify components of basic nutrition assessments of the patient.
B. Recognize symptoms of nutrition problems, particularly as they relate to physical therapy.
C. Interpret nutrition-related laboratory values and identify acceptable values for the patient.

D. Identify possible solutions to nutrition problems and communicate the need for medical or nutritional intervention to a dietitian and/or physician.
E. Understand the key components of the Energy Delivery System.
F. Determine if a patient has the appropriate compensatory mechanisms to diseases involving the Energy Delivery System to participate safely in a physical therapy program.
G. Identify laboratory values that constitute absolute contraindications to participation in a physical therapy program.
H. Assess normal and abnormal physiologic responses to physical therapy and determine when a physician should be notified regarding abnormal responses.

APPENDIX C

PRIMARY CARE PHYSICAL THERAPY

National Advisory Committee Members

Sharon Anderson, PT, DrPH
Associate Professor
Loma Linda University
Loma Linda, CA 92350

William G. Boissonnault, PT, DHSc, FAAOMPT
7420 Kenyon Drive
Middleton, WI 53562

Carol M. Davis, PT, EdD
University of Miami School of Medicine
Division of Physical Therapy
5915 Ponce de Leon Blvd.
Coral Gables, FL 33146

COL Gail Deyle, PT, MPT, OCS
ATTENTION: MCHE-PMR Physical Therapy
Brook Army Medical Center
3851 Roger Brook Dr.
Fort Sam Houston, TX 78234-6200

Joe Farrell, PT, MS
Redwood Orthopaedic PT, Inc.
20211 Patio Drive, Suite 205
Castro Valley, CA94546

LTC Timothy W. Flynn, PT, PhD, OCS, FAAOMPT
Associate Professor
U.S. Army- Baylor Graduate Program in Physical Therapy
3151 Scott Rd.
Fort Sam Houston, TX 78234-6138

Joseph J. Godges, PT, MA, OCS
6149 West 75th Place
Los Angeles, CA 90045

David G. Greathouse, PT, PhD
Belmont University
1900 Belmont Blvd.
Nashville, TN 37212-3157
Office Phone: 615-963-4195

COL Nancy Henderson, PT, PhD, OCS
8511 83rd Street Ct. SW
Apt 711
Lakewood, WA 98498

Jan K Richardson, PT, PhD, OCS
President, APTA
1111 North Fairfax Street
Alexandria, VA 22314-1488

Rick C. Ritter, PT, MA, OCS
7080 Donlon Way
Suite 209
Dublin, CA 94568

Carol Jo Tichenor, PT, MA
Director, PT Residency Program in Advanced
Orthopaedic Manual Therapy
Kaiser Permanente Medical Center
27400 Hesperian Blvd.
Hayward, CA 94545

APPENDIX D

PRIMARY CARE PHYSICAL THERAPY PRACTICE ANALYSIS SURVEY

*** Please note that in this survey you must complete the front and back of each page.**

DEMOGRAPHICS SECTION

Please answer each item by placing an (x) by the response that most clearly describes **you or your professional activities.**

1. In what state (or country, if outside the United States) is the major portion of your practice? (e.g., California, Germany)

   _____

2. What type (s) of entry-level education program did you complete to become a Physical Therapist?

__ (1) Certificate
__ (2) Bachelor's Degree (please specify major) _____
__ (3) Master's Degree (please specify major) _____
__ (4) Doctoral Degree (please specify major) _____
__ (5) Other (please specify) _____

3. What is your highest level of education?

__ (1) Bachelor's Degree (please specify major) _____
__ (2) Master's Degree (please specify major) _____
__ (3) Doctoral Degree (please specify major) _____
__ (4) Other (please specify major) _____

4. Have you completed a post professional residency program? (If yes, please **CIRCLE** the residency program you have completed)

__ (1) Yes (Manual Therapy, Orthopedics, Sports, Neurology, Primary Care, EMG/NCV, Other (please specify)_____)
__ (2) No

5. Are you an APTA board certified specialist in physical therapy? (If yes, please **CIRCLE** your board specialty certification)

__ (1) Yes (CCS, ECS, GCS, NCS, OCS, PCS, SCS)
__ (2) No

6. Please indicate what other credential (s) you possess?

__ (1) Athletic Trainer (ATC)
__ (2) Manual Therapy Certification (MTC)
__ (3) Orthopaedic Manual Therapy Certification (i.e., OMT, FAAOMPT)
__ (4) Certified Strength Conditioning Specialist (CSCS)
__ (5) Other (please specify) _____

7. What is the total number of years that you have been a practicing physical therapist?

__ (1) Less than a year
__ (2) 1-2 years
__ (3) 3-5 years
__ (4) 6-10 years
__ (5) 11-15 years
__ (6) 16-20 years
__ (7) 21 or more years

8. Do you have experience working as a physical therapist in a branch of the United States Military? (If yes, please **CIRCLE** the branch of United States Military)

__ (1) Yes (Army, Navy, Air Force, USPHS, Other (please specify)_____)
__ (2) No

9. What is the total number of years that you have practiced in the primary care setting?

__ (1) I have not practiced in the primary care setting
__ (2) Less than 2 years
__ (3) 2-5 years
__ (4) 6-10 years
__ (5) 11-15 years
__ (6) 16-20 years
__ (7) 21 or more years
__ (8) Not Applicable (please specify reason) _____

10. Which best describes your Physical Therapy State Practice Act?

__ (1) Direct Access (Perform Evaluation and Treatment intervention without physician referral)
__ (2) Partial Direct Access to Evaluation/Consultation without physician referral
__ (3) Physician referral only
__ (4) Not applicable to State Practice Acts, as my practice is under Federal/Military regulation/jurisdiction
__ (5) Other (please specify) _____

11. Do you evaluate and/or treat patients without a physician referral?

__ (1) Yes
__ (2) No
__ (3) Other (please specify) _____

12. Please indicate the **percentages** of your time spent on each of the following types of professional activity (100% total).

___ (1) Direct patient care
___ (2) Direct primary care physical therapy patient care
___ (3) Consultation
___ (4) Administration/Management
___ (5) Teaching
___ (6) Research
___ (7) Other (please specify) _____

13. At the present time, how many patients do you personally treat each day?

__ (1) Less than 5 patients
__ (2) 6-10 patients
__ (3) 11-15 patients
__ (4) 16-20 patients
__ (5) 21-25 patients
__ (6) More than 25 patients
__ (7) Not Applicable (please specify) _____

14. Please indicate the type of setting where you provide the **MAJORITY** of your professional responsibilities at the present time. (If you work in more than one setting, please check the **ONE** setting you spend most of your time)

__ (1) Military Hospital – Outpatient Care
__ (2) Military Hospital– Inpatient/Acute Care
__ (3) Military Educational Facility
__ (4) United States Public Health System
__ (5) Civilian Hospital – Inpatient/Acute Care
__ (6) Civilian Hospital – Outpatient Care
__ (7) Civilian – Athletics/Olympic Team Coverage
__ (8) Civilian – Medical Group/Outpatient Care
__ (9) Civilian – Private Practice/Outpatient
__ (10) Civilian – Academic Institution
__ (11) Civilian - Rehabilitation Center
__ (12) Extended Care Facility/Nursing Home
__ (13) Home Health Agency
__ (14) Business/Industry
__ (15) Other (please specify) _____
__ (16) Not Applicable (please specify) _____

15. In your current practice area, indicate payer (s) responsible for reimbursement (s) of physical therapy services rendered to your patients/clients.

__ (1) Private Pay
__ (2) Private Insurance/Fee For Service
__ (3) Prepaid Health Plan/Health Maintenance Organization
__ (4) Prepaid Health Plan/Military
__ (5) Veterans Administration
__ (6) United States Public Health Service
__ (7) Worker's Compensation
__ (8) Medicare
__ (9) Medicaid
__ (10) Other (please specify) _____
__ (11) Not Applicable (please specify) _____

16. What educational method has had the **MOST** influence on developing your present level of clinical skill?

__ (1) Self-study (books, articles, videotapes, internet)
__ (2) Inservice, peer interaction
__ (3) Workshops, seminars, study groups
__ (4) Mentoring
__ (5) Formal primary care-related physical therapy residency
__ (6) Graduate program
__ (7) Other (please specify) _____

17. What is your gender?

__ (1) Male
__ (2) Female

18. What is your age?

__ (1) Under 25 years
__ (2) 26-34 years
__ (3) 35-44 years
__ (4) 45-54 years
__ (5) 55-64 years
__ (6) 65 or over

19. Which of the following best describes your racial/ethnic background?

__ (1) African American
__ (2) Asian American or Pacific Islander
__ (3) Caucasian, non-Hispanic
__ (4) Chicano/Mexican American
__ (5) Native American
__ (6) Puerto Rican/Puerto Rican American
__ (7) Other (please specify) _____

PART I: PROFESSIONAL RESPONSIBILITIES

The purpose of Part I is to ascertain what Primary Care Physical Therapists (PCPT) do in their day-to-day professional roles. Please use this inventory to identify the tasks that constitute important aspects of primary care physical therapy practice.

Of the following pages, you will find a list of professional responsibilities that have been grouped into clusters of related responsibilities called practice dimensions. The nine job dimensions are:

1. Conduct Examination
2. Perform Evaluation
3. Determine Diagnosis
4. Determine Prognosis
5. Perform Intervention
6. Plan Discharge
7. Measure Outcomes
8. Participate in Primary Care Professional Development
9. Participate in Community Health Education

Using the Rating Scale

For each responsibility below, you will be asked to make two judgments using the rating scale presented below.

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following tasks? (Please circle your answer.)

LEVEL OF IMPORTANCE: For each of the following tasks, how important is the task to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task, i.e. even if you do not perform a task, still rate the level of importance of that task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

I. CONDUCT EXAMINATION	PERFORM TASK?	LEVEL OF IMPORTANCE
A. OBTAIN HISTORY:		
1. Assess the patient's/client's communication ability, affect, and learning style.	Y / N	0 1 2 3 4
2. Determine the patient's mental status and psychological function (e.g., cognition, memory, reasoning ability, anxiety, and depression).	Y / N	0 1 2 3 4
3. Identify the patient's major problem (s) and/or concern (s).	Y / N	0 1 2 3 4
4. Obtain the patient's description of their current functional limitations and/or recent changes in their physical function.	Y / N	0 1 2 3 4
5. Determine the patient's normal level of physical activity and functional capacity.	Y / N	0 1 2 3 4
6. Determine the area, type, time behavior, aggravating/easing factors and past history of each presenting symptom.	Y / N	0 1 2 3 4
7. Obtain the patient's description of any disability (i.e., the inability to participate in a desired social role) associated with their functional limitations.	Y / N	0 1 2 3 4
8. Identify the patient's expectations, perceptions, and goals for the physical therapy intervention.	Y / N	0 1 2 3 4
9. Identify the patient's family, significant other, and caregiver expectations, perceptions, and goals for the physical therapy intervention.	Y / N	0 1 2 3 4
10. Identify the patient's social support systems, including family and caregiver resources.	Y / N	0 1 2 3 4
11. Identify cultural beliefs and behaviors that may have an impact on health.	Y / N	0 1 2 3 4

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following tasks? (Please circle your answer.)

LEVEL OF IMPORTANCE: For each of the following tasks, how important is the task to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	PERFORM TASK?	LEVEL OF IMPORTANCE
B. PERFORM SYSTEMS REVIEW		
12. Conduct a review of systems (e.g., cardiovascular, pulmonary, endocrine, gastrointestinal, urogenital, nervous, integumentary, psychological)	Y / N	0 1 2 3 4
13. Discern signs and symptoms that suggest medical disease or an underlying condition outside the scope of physical therapy practice that require consultation and/or referral to a physician and /or other health care practitioners.	Y / N	0 1 2 3 4
14. Identify co-existing health problems (e.g., substance abuse, physical abuse, inadequate nutrition and hydration, cardiac risk factors) that have implications for physical therapy intervention and/or referral to another health care practitioner.	Y / N	0 1 2 3 4
15. Identify current medications and their implications for physical therapy intervention.	Y / N	0 1 2 3 4
16. Identify prevention needs (e.g., fall prevention, lifting instructions, risk factor modification, effects of stretching and strengthening on muscle imbalances) of the patient/client.	Y / N	0 1 2 3 4

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following tasks? (Please circle your answer.)
LEVEL OF IMPORTANCE: For each of the following tasks, how important is the task to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

C. USE TESTS AND MEASURES:	PERFORM TASK?	LEVEL OF IMPORTANCE
17. Select and administer physical examination procedures that will help verify the presence of a suspected medical condition.	Y / N	0 1 2 3 4
18. Select and order laboratory tests needed to obtain information about patient's current medical condition (e.g., sedimentation rate, uric acid analysis).	Y / N	0 1 2 3 4
19. Select and order imaging procedures needed to obtain information about patient's current medical condition (e.g., radiographs, MRI, CT scans).	Y / N	0 1 2 3 4
20. Select and order non-imaging examination procedures to obtain information about patient's current medical condition (e.g., EMG testing, NCV studies, resting or exercise ECGs, Doppler studies).	Y / N	0 1 2 3 4
21. Select and administer physical examination procedures that will determine the cause of the patient's loss of function (e.g., the key impairments related to the patient's reported functional limitations).	Y / N	0 1 2 3 4
22. Identify abnormalities and signs potentially arising from visceral structures of the head, neck, chest, abdominal and pelvis while performing the musculoskeletal examination.	Y / N	0 1 2 3 4

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following tasks? (Please circle your answer.)

LEVEL OF IMPORTANCE: For each of the following tasks, how important is the task to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	PERFORM TASK?	LEVEL OF IMPORTANCE
23. Determine the measurement characteristics (reliability, validity, sensitivity, specificity, and likelihood ratios) of the historical factor, tests, and measures employed during the examination.	Y / N	0 1 2 3 4
24. Consult with other health care practitioners, when necessary, to interpret tests and measures (e.g., primary care physicians, radiologists).	Y / N	0 1 2 3 4

II. PERFORM EVALUATION

25. Perform evaluation of patients/clients with *neuromusculoskeletal complaints* with or without referral from a physician or other health care practitioner in compliance with relevant physical therapy state practice acts.	Y / N	0 1 2 3 4
26. Perform neuromusculoskeletal evaluation of patients with *acute disease and disability* (e.g., traumatic injury to soft tissues and joints) with or without referral from a physician or other health care practitioner in compliance with relevant physical therapy state practice acts.	Y / N	0 1 2 3 4

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following tasks? (Please circle your answer.)

LEVEL OF IMPORTANCE: For each of the following tasks, how important is the task to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	PERFORM TASK?	LEVEL OF IMPORTANCE
27. Perform neuromusculoskeletal evaluation of patients with *chronic disease and disability* (e.g., rheumatic diseases, diabetes, neuropathies, dystrophies, myopathies, and CNS conditions) with or without referral from a physician or other health care practitioner in compliance with relevant physical therapy state practice acts.	Y / N	0 1 2 3 4
28. Perform vocational assessments of the permanently impaired patient/client with neuromusculoskeletal disorder.	Y / N	0 1 2 3 4
29. Determine the need for extremity bracing, splinting, or casting.	Y / N	0 1 2 3 4
30. Determine the patient's/client's ability to benefit from physical therapy.	Y / N	0 1 2 3 4
31. Determine the need for referring the patient/client to another health care practitioner.	Y / N	0 1 2 3 4
32. Determine/diagnose the relation between physical impairments, functional limitations, and disabilities in patients with musculoskeletal, neuromuscular, cardiopulmonary, and integumentary disorders.	Y / N	0 1 2 3 4

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following tasks? (Please circle your answer.)

LEVEL OF IMPORTANCE: For each of the following tasks, how important is the task to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

III. DETERMINE DIAGNOSIS	PERFORM TASK?	LEVEL OF IMPORTANCE
33. Establish a physical therapy diagnostic or syndrome classification label encompassing a cluster of signs and symptoms (e.g., patellofemoral pain syndrome, lumbar derangement syndrome), whenever possible.	Y / N	0 1 2 3 4
34. Determine the diagnostic code (e.g., ICD-9 code, ICIDH code) most appropriate for each patient.	Y / N	0 1 2 3 4
IV. DETERMINE PROGNOSIS		
35. Design the physical therapy intervention (i.e., the most appropriate treatment approach and strategy for each patient/client) based on the examination and/or re-examination data.	Y / N	0 1 2 3 4
36. Determine the degree to which intervention is likely to achieve anticipated goals and desired outcomes.	Y / N	0 1 2 3 4
V. PERFORM INTERVENTION		
37. Prescribe and/or administer over-the-counter medications, when indicated, for patients presenting to physical therapy with neuromusculoskeletal conditions/dysfunctions.	Y / N	0 1 2 3 4

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following tasks? (Please circle your answer.)

LEVEL OF IMPORTANCE: For each of the following tasks, how important is the task to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	PERFORM TASK?	LEVEL OF IMPORTANCE
38. Prescribe and/or administer non-narcotic medications, when indicated, for patients presenting to physical therapy with neuromusculoskeletal conditions/dysfunctions.	Y / N	0 1 2 3 4
39. Administer appropriate cardiopulmonary emergency procedures when necessary (e.g., BCLS, collaborative ACLS).	Y / N	0 1 2 3 4
40. Develop and provide primary preventive interventions (e.g., general health promotion).	Y / N	0 1 2 3 4
41. Develop and provide secondary preventive interventions (e.g., early diagnosis and prompt intervention).	Y / N	0 1 2 3 4
42. Develop and provide tertiary preventive interventions (e.g., limiting morbidity of chronic and irreversible diseases).	Y / N	0 1 2 3 4

VI. PLAN DISCHARGE

43. Educate the patient/client and the family, significant others, caregivers or other professionals about the current neuromusculoskeletal condition and plan of care.	Y / N	0 1 2 3 4

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following tasks? (Please circle your answer.)

LEVEL OF IMPORTANCE: For each of the following tasks, how important is the task to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	PERFORM TASK?	LEVEL OF IMPORTANCE
44. Based on the physical therapy examination and/or re-examination data, provide recommendations for return-to-work status for patients.	Y / N	0 1 2 3 4
45. Facilitate the continuity of care in patients receiving physical therapy who are progressing from acute, to subacute, to home health, to outpatient care.	Y / N	0 1 2 3 4
46. Manage the coordination of care with the patient/client, family, significant others, caregivers, other professionals, and other relevant persons and ensure that the coordination of necessary care has satisfactorily occurred.	Y / N	0 1 2 3 4
47. Provide for appropriate post discharge, follow-up or referral.	Y / N	0 1 2 3 4
VII. MEASURE OUTCOMES		
48. Develop or assist with the development of research proposals for measuring the effectiveness of primary care physical therapy.	Y / N	0 1 2 3 4
49. Determine patient/client satisfaction following physical therapy intervention for an episode of care.	Y / N	0 1 2 3 4

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following tasks? (Please circle your answer.)

LEVEL OF IMPORTANCE: For each of the following tasks, how important is the task to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	PERFORM TASK?	LEVEL OF IMPORTANCE
50. Implement region-specific and disease-specific outcome measures related to the management of neuromusculoskeletal conditions.	Y / N	0 1 2 3 4
51. Implement general health outcome measures related to management of the neuromusculoskeletal conditions.	Y / N	0 1 2 3 4
52. Design, conduct, analyze, and disseminate research pertaining to evaluation and management of neuromusculoskeletal conditions.	Y / N	0 1 2 3 4
53. Develop and define norms and other evidence-based measures to assess and predict risks for early intervention.	Y / N	0 1 2 3 4
54. Use outcomes to monitor overall medical costs (e.g., amount of specialty referrals and procedures performed).	Y / N	0 1 2 3 4
55. Use outcome to monitor quality of care delivered.	Y / N	0 1 2 3 4
56. Determine costs associated with physical therapy interventions (e.g., number of visits, cost per visit) for episodes of care for a specific diagnostic category.	Y / N	0 1 2 3 4

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following tasks? (Please circle your answer.)

LEVEL OF IMPORTANCE: For each of the following tasks, how important is the task to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

VIII. PARTICIPATE IN PRIMARY CARE PROFESSIONAL DEVELOPMENT

	PERFORM TASK?	LEVEL OF IMPORTANCE
57. Comply with all the requirements of state and local jurisdictions regulating the practice of physical therapy.	Y / N	0 1 2 3 4
58. Abide by the American Physical Therapy Association's Physical Therapy Practice Guidelines and Professional Code of Ethics.	Y / N	0 1 2 3 4
59. Serve as primary care physical therapy clinical instructor to interns, residents, and/or staff.	Y / N	0 1 2 3 4
60. Serve as primary care physical therapy consultant to health care institutions, payers and policy makers.	Y / N	0 1 2 3 4
61. Perform case management (e.g., determining the need for professional services, coordinating care between employer and health care provider) for an insurance payer or provider network.	Y / N	0 1 2 3 4

IX. PARTICIPATE IN COMMUNITY HEALTH EDUCATION

62. Plan, implement, and coordinate effective health education programs to enhance and maintain healthy lifestyles.	Y / N	0 1 2 3 4

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following tasks? (Please circle your answer.)

LEVEL OF IMPORTANCE: For each of the following tasks, how important is the task to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	PERFORM TASK?	LEVEL OF IMPORTANCE
63. Develop, implement, and monitor effectiveness of programs designed to reduce work-related injuries.	Y / N	0 1 2 3 4
64. Develop and implement programs where exercise is a known element in risk factor modification (e.g., cardiovascular disease, diabetes, depressive disorders, low back pain, and postpartum complications).	Y / N	0 1 2 3 4
65. Evaluate effectiveness of health education programs in addressing recognized needs in the community.	Y / N	0 1 2 3 4

PART I - PROFESSIONAL RESPONSIBILITIES

Please use this space to list any important additional responsibilities you feel should have been included in the questionnaire.

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PART II: PROCEDURES

This section focuses on some of the procedures that Primary Care Physical Therapists (PCPT) use in their work. The procedures are listed in two sections:

1. Evaluation Procedures
2. Intervention

Using the Rating Scales

For each procedure below, you will be asked to make two judgments using the following rating scales:

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following procedures?

LEVEL OF IMPORTANCE: For each of the following procedures, how important is the procedure to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

I. EVALUATION PROCEDURES	PERFORM TASK?	LEVEL OF IMPORTANCE
A. OBTAIN HISTORY		
1. Mental function examination (e.g., arousal, attention, and cognition tests).	Y / N	0 1 2 3 4
2. Identification of patient's primary and secondary problems/concerns.	Y / N	0 1 2 3 4
3. Symptom behavior questioning.	Y / N	0 1 2 3 4
B. PERFORM PHYSICAL EXAMINATION		
4. Review of systems (e.g., cardiovascular, pulmonary, endocrine, gastrointestinal, urogenital, nervous, integumentary, and psychological).	Y / N	0 1 2 3 4

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following procedures?

LEVEL OF IMPORTANCE: For each of the following procedures, how important is the procedure to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	PERFORM TASK?	LEVEL OF IMPORTANCE
5. Aerobic capacity and endurance.	Y / N	0 1 2 3 4
6. Anthropometric characteristics.	Y / N	0 1 2 3 4
7. Auscultation tests (e.g., heart, lungs, bruits).	Y / N	0 1 2 3 4
8. Biomechanical examination of the upper or lower quarter (e.g., muscle imbalance, functional strength, gait, intersegmental biomechanical relationships).	Y / N	0 1 2 3 4
9. Posture assessment.	Y / N	0 1 2 3 4
10. Cranial nerve function.	Y / N	0 1 2 3 4
11. Environmental, home and work (job/school/play) barriers assessment.	Y / N	0 1 2 3 4
12. Ergonomics and body mechanics observation.	Y / N	0 1 2 3 4
13. Integumentary condition.	Y / N	0 1 2 3 4
14. Joint capsule and ligament function.	Y / N	0 1 2 3 4
15. Neurological status examination (e.g., sensation, segmental muscle tests, reflexes, proprioception).	Y / N	0 1 2 3 4

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following procedures?

LEVEL OF IMPORTANCE: For each of the following procedures, how important is the procedure to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	PERFORM TASK?	LEVEL OF IMPORTANCE
16. Neuromotor development and sensory integration.	Y / N	0 1 2 3 4
17. Pain assessment.	Y / N	0 1 2 3 4
18. Percussion tests (e.g., bony and soft tissues, cavities).	Y / N	0 1 2 3 4
19. Assistive and adaptive device requirements.	Y / N	0 1 2 3 4
20. Orthotic, protective, and supportive device requirements.	Y / N	0 1 2 3 4
21. Prosthetic requirements	Y / N	0 1 2 3 4
22. Regional musculoskeletal examination (e.g., joint ROM, joint accessory motion, movement/pain relationships, muscle flexibility, muscle strength, nerve tension, spinal segmental motion).	Y / N	0 1 2 3 4
23. Self-care and home management (including ADL and Instrumental ADL).	Y / N	0 1 2 3 4
24. Vascular status examination (including peripheral and central pulses).	Y / N	0 1 2 3 4

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following procedures?

LEVEL OF IMPORTANCE: For each of the following procedures, how important is the procedure to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	PERFORM TASK?	LEVEL OF IMPORTANCE
25. Ventilation, respiration (gas exchange), and circulatory function.	Y / N	0 1 2 3 4
26. Vestibular examination.	Y / N	0 1 2 3 4
C. EXAMINATION / CONSULTATION REQUESTS		
27. Order assistive and adaptive devices.	Y / N	0 1 2 3 4
28. Order orthotic, protective, and supportive devices.	Y / N	0 1 2 3 4
29. Order prosthetic devices.	Y / N	0 1 2 3 4
30. Order laboratory tests and procedures.	Y / N	0 1 2 3 4
31. Order plain film radiographs.	Y / N	0 1 2 3 4
32. Order bone scans, MRI or CT scans.	Y / N	0 1 2 3 4
II. PERFORM INTERVENTION		
33. Administer basic cardiac life support (BCLS) in cardiopulmonary emergency situations.	Y / N	0 1 2 3 4

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following procedures?

LEVEL OF IMPORTANCE: For each of the following procedures, how important is the procedure to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	PERFORM TASK?	LEVEL OF IMPORTANCE
34. Administer advanced cardiac life support (ACLS) collaboratively as a team with other emergency health care professionals (e.g., physicians, nurses, respiratory therapists).	Y / N	0 1 2 3 4
35. Prescribe and/or administer over-the-counter medications for neuromusculoskeletal conditions.	Y / N	0 1 2 3 4
36. Prescribe and/or administer non-narcotic medications for neuromusculoskeletal conditions.	Y / N	0 1 2 3 4
37. Perform case management.	Y / N	0 1 2 3 4
38. Perform discharge planning.	Y / N	0 1 2 3 4
39. Prescription, application, and as appropriate, fabrication, of devices and equipment (assistive, adaptive, orthotic, protective, and supportive).	Y / N	0 1 2 3 4
40. Prescription, application, and as appropriate, fabrication, of prosthetic devices and equipment.	Y / N	0 1 2 3 4
41. Administer, monitor response, and modify cardiopulmonary/cardiovascular rehabilitation.	Y / N	0 1 2 3 4

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following procedures?

LEVEL OF IMPORTANCE: For each of the following procedures, how important is the procedure to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	PERFORM TASK?	LEVEL OF IMPORTANCE
42. Administer, monitor response, and modify neuromuscular rehabilitation.	Y / N	0 1 2 3 4
43. Prescribe and/or administer, monitor response, and modify therapeutic exercise.	Y / N	0 1 2 3 4
44. Perform posture and ergonomic instruction.	Y / N	0 1 2 3 4
45. Administer, monitor response, and modify physical agents (e.g., US, heat, cold).	Y / N	0 1 2 3 4
46. Administer, monitor response, and modify mechanical modalities (e.g., CPM, traction).	Y / N	0 1 2 3 4
47. Administer, monitor response, and modify electrotherapeutic modalities (e.g., biofeedback, iontophoresis, NMES).	Y / N	0 1 2 3 4
48. Perform wound management (including debridement procedures).	Y / N	0 1 2 3 4
49. Perform manual therapy (including mobilization and manipulation procedures).	Y / N	0 1 2 3 4

PERFORM TASK? YES/NO: During your practice devoted to Primary Care Physical Therapy (PCPT), do you perform each of the following procedures?

LEVEL OF IMPORTANCE: For each of the following procedures, how important is the procedure to Primary Care Physical Therapy (PCPT) practice? (Please rate the level of importance of each task regardless of whether you perform the task.)

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

50. Prescribe and/or administer, monitor response, and modify functional training in self-care and home management (including ADL and Instrumental ADL).	Y / N	0 1 2 3 4
51. Prescribe and/or administer, monitor response, and modify functional training in community and work (job/school/play) integration or reintegration (including Instrumental ADL, work hardening, and work conditioning).	Y / N	0 1 2 3 4
52. Perform airway clearance technique (e.g., chest percussion, vibration, and shaking, pulmonary postural drainage and positioning).	Y / N	0 1 2 3 4

PART II - PROCEDURES

Please use this space to list any important additional procedures you feel should have been included in the questionnaire.

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PART III: KNOWLEDGE AREAS

This section focuses on some of the knowledge areas that Primary Care Physical Therapists (PCPT) use in their work. On the following pages, you will find seven knowledge areas and within each area there are lists of specific knowledges. We are asking you to make a judgment about each specific knowledge.

The seven knowledge dimensions are:

1. Anatomy and Physiology
2. Examination, Evaluation, Diagnosis, and Prognosis
3. Intervention
4. Clinical Pharmacology
5. Diagnostic Imaging Sciences
6. Critical Inquiry
7. Ethical and Legal Considerations

Using the Rating Scales

For each knowledge area below, you will be asked to make a judgment using the rating scale below.

LEVEL OF IMPORTANCE: For each of the following knowledge areas, how important is having knowledge about each of the following areas to Primary Care Physical Therapy (PCPT) practice?

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

I. ANATOMY AND PHYSIOLOGY	LEVEL OF IMPORTANCE
1. Musculoskeletal system	0 1 2 3 4
2. Nervous system	0 1 2 3 4
3. Skin/Integumentary system	0 1 2 3 4
4. Cardiovascular system	0 1 2 3 4

LEVEL OF IMPORTANCE: For each of the following knowledge areas, how important is having knowledge about each of the following areas to Primary Care Physical Therapy (PCPT) practice?

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	LEVEL OF IMPORTANCE
5. Pulmonary system	0 1 2 3 4
6. Gastrointestinal system	0 1 2 3 4
7. Urogenital system	0 1 2 3 4
8. Endocrine system	0 1 2 3 4
II. EXAMINATION, EVALUATION, DIAGNOSIS, AND PROGNOSIS	
9. Scientific methodology of measurement characteristics (e.g., reliability, validity, sensitivity, specificity, and likelihood ratios).	0 1 2 3 4
10. Patient/client interview skills (e.g., focus and following, reflective statements, inquiry, confrontation, enlisting cooperation).	0 1 2 3 4
11. Physical examination procedures for evaluating acute musculoskeletal trauma.	0 1 2 3 4
12. Physical examination procedures for abdominal and chest cavities (e.g., lung sound auscultation, abdominal organ palpation).	0 1 2 3 4
13. Physical examination for evaluating the central and peripheral nervous system.	0 1 2 3 4
14. Physical examination procedures for evaluating the peripheral vascular and lymphatic systems.	0 1 2 3 4

LEVEL OF IMPORTANCE: For each of the following knowledge areas, how important is having knowledge about each of the following areas to Primary Care Physical Therapy (PCPT) practice?

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	LEVEL OF IMPORTANCE
15. Signs and symptoms of cardiovascular disease (including risk factor identification).	0 1 2 3 4
16. Signs and symptoms of medical conditions/diseases that mimic musculoskeletal disorders.	0 1 2 3 4
17. Normal versus abnormal laboratory values.	0 1 2 3 4
18. Signs and symptoms of substance abuse (e.g., alcohol, drugs).	0 1 2 3 4
19. Signs and symptoms of mental disorders frequently associated with musculoskeletal pain syndromes (e.g., anxiety, depressive, personality, and somatoform disorders).	0 1 2 3 4
20. Signs and symptoms of physical abuse (e.g., child, spousal, and elder abuse).	0 1 2 3 4
21. Differential diagnosis of musculoskeletal disorders (e.g., differentiating tendon vs. ligament vs. nerve disorders).	0 1 2 3 4
22. Biomechanical abnormalities commonly related to musculoskeletal pain and dysfunction.	0 1 2 3 4
23. Functional work capacity assessment.	0 1 2 3 4
24. Assessment of strength, flexibility, endurance, and coordination fitness.	0 1 2 3 4
25. Expected outcomes following physical therapy intervention for common musculoskeletal disorders.	0 1 2 3 4

LEVEL OF IMPORTANCE: For each of the following knowledge areas, how important is having knowledge about each of the following areas to Primary Care Physical Therapy (PCPT) practice?

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	LEVEL OF IMPORTANCE
26. Communication processes between health care practitioners when discussing patient-related data (e.g., effective verbal and written communication, patient confidentiality assurances, electronic media use).	0 1 2 3 4
III. INTERVENTION	
27. Community education consisting of primary prevention and wellness programs for commonly occurring physical disablement (e.g., obesity, falls, back pain, repetitive strain injuries).	0 1 2 3 4
28. Basic cardiac life support (BCLS).	0 1 2 3 4
29. Advanced cardiac life support (ACLS).	0 1 2 3 4
30. Extremity bracing, casting, and splinting.	0 1 2 3 4
31. Taping techniques.	0 1 2 3 4
32. Physical agents.	0 1 2 3 4
33. Manual therapy for joint and soft tissue mobilization.	0 1 2 3 4
34. Neuromuscular re-education for proprioceptive/cognitive deficits.	0 1 2 3 4
35. Therapeutic exercise.	0 1 2 3 4
36. Work hardening/conditioning programs.	0 1 2 3 4

LEVEL OF IMPORTANCE: For each of the following knowledge areas, how important is having knowledge about each of the following areas to Primary Care Physical Therapy (PCPT) practice?

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	LEVEL OF IMPORTANCE
37. Cognitive-behavioral therapy in the management of patients/clients with somatic pain.	0 1 2 3 4
38. Prevention of common musculoskeletal conditions.	0 1 2 3 4
39. Requirements of the Americans With Disabilities Act when examining whether public environments meet accessibility standards.	0 1 2 3 4
IV. CLINICAL PHARMACOLOGY	
40. *Rationale and clinical indications* for commonly used medications (e.g., analgesics, anti-inflammatory, muscle relaxants, anti-hypertensives, diuretics) in patients presenting to physical therapy with common neuromusculoskeletal and medical conditions.	0 1 2 3 4
41. *Contraindications* of commonly used medications in patients presenting to physical therapy with common neuromusculoskeletal and medical conditions.	0 1 2 3 4
42. *Interactive effects* of commonly used medications in patients presenting to physical therapy with common neuromusculoskeletal and medical conditions.	0 1 2 3 4
43. Basic prescription writing elements (e.g., dosage, timing) of analgesics and anti-inflammatory drugs.	0 1 2 3 4

LEVEL OF IMPORTANCE: For each of the following knowledge areas, how important is having knowledge about each of the following areas to Primary Care Physical Therapy (PCPT) practice?

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	LEVEL OF IMPORTANCE
V. DIAGNOSTIC IMAGING SCIENCES	
44. General principles of diagnostic imaging procedures.	0 1 2 3 4
45. Scientific methodology of measurement characteristics (e.g., sensitivity and specificity) of diagnostic imaging procedures.	0 1 2 3 4
46. Basic radiologic anatomy and common radiologic abnormalities of the spine and extremities.	0 1 2 3 4
47. Principles for ordering diagnostic imaging (e.g., plain film radiographs, CT scans, MRI, bone scans).	0 1 2 3 4
VI. CRITICAL INQUIRY	
48. Methods for accessing and critically appraising current relevant literature (e.g., using computer to access Medline, Cochrane Library).	0 1 2 3 4
49. Critical analysis of scientific literature (e.g., research design, sampling, reliability, data analysis, validity).	0 1 2 3 4
50. Application of research findings to primary care physical therapist practice and education.	0 1 2 3 4
51. Methods for participating in designing and conducting clinical, basic, or applied research.	0 1 2 3 4

LEVEL OF IMPORTANCE: For each of the following knowledge areas, how important is having knowledge about each of the following areas to Primary Care Physical Therapy (PCPT) practice?

(0) Not important at all
(1) Minimally important
(2) Moderately important
(3) Highly important
(4) Extremely important

	LEVEL OF IMPORTANCE
VII. ETHICAL AND LEGAL CONSIDERATIONS	
52. Professional standards and ethical guidelines	0 1 2 3 4
53. State and local practice laws.	0 1 2 3 4
54. Scope of practice of health care disciplines.	0 1 2 3 4

PART III - KNOWLEDGE AREAS

Please use this space to list any important additional knowledge areas you feel should have been included in the questionnaire.

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APPENDIX E

PRIMARY CARE PHYSICAL THERAPY

Pilot Group of Subject Matter Experts

William G. Boissonnault, PT, DHSc, FAAOMPT
7420 Kenyon Drive
Middleton, WI 53562
Phone (608) 265-3341
Email: Boiss@surgery.wisc.edu

Susan Hobbel, PT, MS
2 Dawnview Way
San Francisco, CA 94131
Email: Susan.Hobbel@kp.org

Don Jarboe, PT, OCS
381 N Front Street
Wilmington, NC 28401
Phone: (901) 763-7674
Email: drjarboe@aol.com

John Lockard, PT, OCS
8200 Flov-Town Ave, #11
Wyndmoor, PA 19038

Brian Murphy, PT, MPT
500 Foothill Blvd.,
Salt Lake City, UT 84148
Phone: (801) 582-1565
Email: brian.Murphy@med.va.gov

Terry Randall, PT, MS, OCS, ATC
519 Autumn Dr.,
Somerset, KY 42503
Email: spts@hyperaction.net

LTC Timothy W. Flynn, PT, PhD, OCS, FAAOMPT
Associate Professor
U.S. Army-Baylor Graduate Program in Physical Therapy
3151 Scott Rd.,
Fort Sam Houston, TX 78234-6138
Phone: (210) 221-8410
Email: Timothy.Flynn@cen.amedd.army.mil

APPENDIX F: CORRESPONDENCE

May 8, 2000

Dear National Advisory Committee Member:

Once again, thank you for your participation in assisting us with developing the survey instrument which will identify the unique content and process areas essential to the primary care physical therapy practitioner. Your input to our first drat of the survey instrument have been compiled and categorized as Professional Responsibilities, Procedures/Techniques, and General Knowledge Areas. Furthermore, these three main categories have been organized into clusters of smaller subcategories. Items/competencies were carefully analyzed to improve clarity and avoid redundancies. Our efforts in successfully putting together your responses into this first draft of the survey instrument have been professionally edited by our psychometric consultant, Joan Knapp, PhD, of Knapp & Associates International, Inc.

Once again, please review the following items/competencies in the attached document and provide us with your feedback on the items/competencies per the following directions:

1. Underline the items/competencies you feel are important Responsibilities, Procedures/Techniques, and Knowledge areas.

2. Put a line through the sentence (s) or word (s) which you feel are not essential to the primary care physical therapy practitioner.

3. Comment, modify, and/or change the wording of the sentences as necessary to improve clarity.

4. Carefully re-examine each item in each category/subcategory for redundancies and indicate where this item is repeated.

5. Make a notation beside each redundant or mis-categorized item and indicate which category/subcategory the item should belong.

6. Please feel free to mark through any categorical headings and/or the parts of items; that you disagree with and replace with the appropriate headings and/or items. Please feel free to add items to categories as indicated.

Your time and efforts are greatly appreciated. **PLEASE RESPOND BY MAY 31, 2001.**

Please contact us if you have any questions, comments, or suggestions via fax/phone, voice mail, e-mail, or written correspondence.

Sincerely,

Robert E. DuVall, PT, MMSc, OCS, MTC, PCC, CSCS
Doctoral Student, USA, FL
Phone: (770) 979-1400
Fax: (770) 978-3360
Email: robertduvall@sprintmail.com

Edsen B. Donato, PT, MPT, OCS, CHT
Doctoral Candidate, LLU, CA
Phone: (909) 427-6995
Fax: (909) 478-0069
Email: edonato1@aol.com

APPENDIX F: CORRESPONDENCE

E-mail Correspondence

May 8, 2000

RE: PCPT Practice Analysis - First Draft of the Survey Instrument

Dear National Advisory Committee Members:

Once again, thank you for your participation in assisting us with developing the survey instrument which will identify the unique content and process areas essential to the primary care physical therapy practitioner. Your input to our first draft of the survey instrument have been compiled and categorized as Professional Responsibilities, Procedures/Techniques, and General Knowledge Areas. Furthermore, these three main categories have been organized into clusters of smaller categories. Items/competencies were carefully analyzed to improve clarity and avoid redundancies. Our efforts in successfully putting together your responses into this first draft of the survey instrument have been professionally edited by our psychometric consultant, Joan Knapp, PhD, of Knapp & Associates International, Inc.

Please be advised, you will be receiving the document (PCPT Practice Analysis - First Draft of the Survey Instrument) in the mail within the next few days for your critical review of the items/competencies. Your time and efforts are greatly appreciated. If you have any questions, comments, or suggestions, please feel free to contact us via fax/phone, voice mail, e-mail, or written correspondence.

Sincerely,

Edsen B. Donato, PT, MPT, OCS, CHT
Doctoral Candidate, Loma Linda University, CA
Phone/Fax: (909) 478-0069
Voice Mail: (909) 532-0344
Email: edonato1@aol.com

Robert E. DuVall, PT, MMSc, OCS, MTC, PCC, CSCS
Doctoral Student, University of St. Augustine, FL
Phone: (770) 979-1400
Fax: (770) 978-3360
Email: robertduvall@sprintmail.com

APPENDIX F: CORRESPONDENCE

E-mail Correspondence

May 12, 2000

RE: PCPT Practice Analysis - 1st Draft of the Survey Instrument

Dear National Advisory Committee Member:

You were recently sent the first draft of the PCPT Practice Analysis Survey Instrument for your review. In order to get a complete and accurate data, it is important that all surveys be completed and returned so that we can move on to the next level of critical review and revision of the draft. **Please complete and return the survey in the self-addressed, stamped envelope by May 31, 2000** to the following address:

Edsen B. Donato, PT, MPT, OCS, CHT
Robert E. DuVall, PT, MMSc, OCS, MTC, PCC, CSCS
11164 Yardley PL
Loma Linda, CA 92354

Please call, e-mail, or fax us a message if you have any questions, or if you have not received a copy of this survey draft and would like to receive another copy of it.

Sincerely,

Edsen B. Donato, PT, MPT, OCS, CHT
Phone/Fax: (909) 478-0069

Robert E. DuVall, PT, MMSc, OCS, MTC, PCC, CSCS
Phone: (770) 979-1400

APPENDIX F: CORRESPONDECE

August 14, 2000

Dear National Advisory Committee Member:

Once again, thank you for your continued participation in assisting us in developing the Primary Care Physical Therapy (PCPT) Practice Analysis Survey Instrument which will identify the unique content and process areas essential to the PCPT practitioner.

We have made modifications to our second draft from your input. As per your recommendations and suggestions, the items/competencies have been carefully re-analyzed and modified to improve clarity and avoid redundancies.

Please review the following items/competencies in the attached document. Thus, answering the question, "Does the description of the task listed below fit what you consider to be an important task for a physical therapist to perform if he/she is practicing as primary care physical therapist?" and provide us with your feedback on the items/competencies per the following directions:

1. Leave the item/competency unmarked if you feel it is an important Responsibility, Procedure/Technique, and Knowledge area.

2. Put a line through the sentence (s) or word (s) which you feel are not essential to the PCPT practitioner.

3. Comment, modify, and/or change the wording of the sentences as necessary to improve clarity.

4. Carefully re-examine each item in each category/subcategory for redundancies and indicate where this item is repeated. Make a notation beside each redundant or mis-categorized item and indicate which category/subcategory the item should belong.

5. Please feel free to mark through any categorical headings and/or the parts of items that you disagree with and replace with the appropriate headings and/or items. Please feel free to add items to categories as indicated.

Please return your responses to us in the enclosed self-addressed stamped envelope to:

11164 Yardley PL
Loma Linda, CA 92354

PLEASE RESPOND BY SEPTEMBER 15, 2000

Your involvement in this practice analysis is greatly appreciated.

You may contact us if you have any questions, comments, or suggestions via email, phone, fax, or US mail.

Sincerely,

Edsen B. Donato, PT, MPT, OCS, CHT
Doctoral Candidate/LLU
Phone/Fax: (909) 478-0069
Email: edonato1@aol.com

Robert E. DuVall, PT, MMSc, OCS, MTC, PCC, CSCS
Doctoral Student/USA
Phone: (770) 979-1400
Fax: (770) 978-3360
Email: robertduvall@sprintmail.com

Grenith Zimmerman, PhD
Associate Dean, Research
and Professor of Biostatistics
School of Allied Health Professions
Loma Linda University
Phone: (909) 558-4632

APPENDIX F: CORRESPONDENCE

January 6, 2001

Dear Primary Care Physical Therapist:

Please find enclosed copy of the Primary Care Practice Analysis instrument. You have been selected to be a PILOT participant for our study. Due to the limited number of Primary Care Physical Therapists, you are one of only six pilot participants. Therefore, it is extremely important that we receive not only your completed survey, but additional comments as to our instrument's instructions, clarity and any other beneficial suggestions/comments. We will NOT request that you later retake the mass mail-out survey as our psychometric consultant has informed us that your pilot data will be included in the total data analysis.

We need your completed survey and comments returned by January 15, 2001, so we can incorporate your suggestions and send the mass mail-out to the target population in mid January, 2001, well before the 2001 APTA Combined Sections Meeting. For your convenience, I have enclosed an Overnight Return Postage Paid Envelope. Our psychometric consultant has informed us that January is the best time to implement this type of survey and again, due to the limited numbers of Primary Care Physical Therapists, your data and comments are very important.

Please contact me if I may be of assistance.

On behalf of co-investigator, Edsen Donato, PT, MPT, OCS, CHT, and our National Primary Care Advisory Committee, we thank you.

Sincerely,

Bob DuVall, PT, MMSc, OCS
2645 Wilshire Terrace
Lawrenceville, GA 30044
Phone: (770) 985-1010
Cell Phone: (678) 362-9849
Fax: (770) 978-0974
Email: robertduvall@sprintmail.com

APPENDIX F: CORRESPONDENCE

January 22, 2001

Dear PCPT Pilot Study Participants:

Thank you for participating in our Pilot Study. The Pilot Study is now completed and one of the most valuable insights we gained was that our survey instructions failed to clarify that you should rate the level of importance even on those tasks that you do not perform (i.e., even if you do not perform a task, maybe due to your state's practice act, you should still rate the level of importance of that task as it relates to Primary Care Physical Therapy Practice). Future survey instructions will request that participants rate the level of importance on all items.

So that we can include your survey in the final study, please rate the level of importance on those few tasks that you do not perform.

We have enclosed a self-addressed and postage paid envelope so that you can return the completed survey for inclusion into the final data analysis.

Thank you again for your valuable contribution to this important survey.

Sincerely,

Robert E. DuVall, PT MMSc, OCS, MTC, PCC, CSCS
Doctoral Student, University of St. Augustine
2645 Wilshire Terrace
Lawrenceville, GA 30044
robertduvall@sprintmail.com
770-979-1400

Edsen Donato, PT, MPT, OCS, CHT
Doctoral Candidate
Loma Linda University
Loma Linda, CA 92354
edonato1@aol.com
909-478-0069

APPENDIX F: CORRESPONDENCE

January 22, 2001

Dear Primary Care Physical Therapist:

With constant changes in our health care delivery system, there appears to be an emerging role for physical therapists in our profession with regards to the delivery of physical therapy services: primary care physical therapy. The Guide to Physical Therapist Practice has briefly outlined the physical therapist's role in primary care. However, there is a need to clearly define this practice area.

The purpose of this survey is to identify the knowledge areas, procedures, and professional responsibilities of physical therapists practicing in the primary care setting (e.g., what you do in your day to day professional practice). The results of this survey will:

1. Provide a description of the knowledge, skills, and abilities utilized by clinicians practicing in primary care physical therapy.
2. Enable physical therapists to formally establish and validate their role in primary care.
3. Provide a curricular direction to institutions and individuals in entry-level, post-professional, and residency-based educational settings.

Since we seek in depth information from knowledgeable professionals, you have been selected as one of a sample of physical therapists who may be practicing in the primary care setting. Because of this sample size it is important that all surveys be completed and returned. It will take approximately 45-50 minutes to fill out the survey. **Please return the survey in the enclosed self-addressed, stamped envelope by February 19, 2001 to Robert E. DuVall, PT, MMSc, OCS, 2645 Wilshire Terrace, Lawrenceville, GA 30044.** We would also welcome any additional comments you may have concerning the survey or the competencies.

You can be assured of complete confidentiality in completing this survey. The survey has an identification number for the sole purpose of keeping track of the total number of surveys distributed only. Your name will not be associated with any reported data.

The results of this survey will help shape the future of the practice of Primary Care Physical Therapy by identifying the clinical competencies for this unique practice area. Your interest and participation is greatly appreciated.

We would be happy to answer any questions you might have. Please write us by regular mail, email, fax, or phone either one of us.

Sincerely,

Robert E. DuVall, PT, MMSc, OCS,
MTC, PCC, CSCS, Doctoral Student
University of St. Augustine
St. Augustine, FL 32086
Phone: (770) 985-1010
Fax: (770) 978-3360
Email: robertduvall@sprintmail.com

Edsen B. Donato, PT, MPT, OCS, CHT
Doctoral Candidate
Loma Linda University
Loma Linda, CA 92354
Phone: (909) 478-0069
Fax: (909) 478-0069
Email: edonato1@aol.com

APPENDIX F: CORRESPONDENCE

CONTROL GROUP

January 30, 2001

Dear Physical Therapist:

With constant changes in our health care delivery system, there appears to be new and emerging roles for physical therapists in our profession with regards to the delivery of physical therapy services: primary care physical therapy. The purpose of this survey is to identify the knowledge areas, procedures, and professional responsibilities of physical therapists practicing in the primary care setting (e.g., what you do in your day to day professional practice). The results of this survey will:

4. Provide a description of the knowledge, skills, and abilities utilized by clinicians practicing in primary care physical therapy.
5. Enable physical therapists to formally establish and validate their role in primary care.
6. Provide a curricular direction to institutions and individuals in entry-level, post-professional, and residency-based educational settings.

Since we seek in depth information from knowledgeable professionals, you have been selected as one of a small sample of physical therapists. Because of the size of the sample, it is important that all surveys be completed and returned. It will take approximately 45-50 minutes to fill out the survey. **Please return the survey in the enclosed self-addressed, stamped envelope by February 19, 2001 to Robert E. DuVall, PT, MMSc, OCS, 2645 Wilshire Terrace, Lawrenceville, GA 30044.** We would also welcome any additional comments you may have concerning the survey or the competencies.

You can be assured of complete confidentiality in completing this survey. The survey has an identification number for the sole purpose of keeping track of the total number of surveys distributed only. Your name will not be associated with any reported data.

The results of this survey will help shape the future of the practice of Primary Care Physical Therapy by identifying the clinical competencies for this unique practice area. Your interest and participation is greatly appreciated.

We would be happy to answer any questions you might have. Please write us by regular mail, email, fax, or phone either one of us.

Sincerely,

Robert E. DuVall, PT, MMSc, OCS,
MTC, PCC, CSCS, Doctoral Student
University of St. Augustine
St. Augustine, FL 32086
Phone: (770) 985-1010
Fax: (770) 978-3360
Email: robertduvall@sprintmail.com

Edsen B. Donato, PT, MPT, OCS, CHT
Doctoral Candidate
Loma Linda University
Loma Linda, CA 92354
Phone: (909) 478-0069
Fax: (909) 478-0069
Email: edonato1@aol.com

APPENDIX F: CORRESPONDENCE

FOLLOW-UP POST CARD

January 31, 2001

Dear Primary Care Physical Therapist:

You were recently sent a practice analysis survey that will shape the future of Primary Care Physical Therapy. Due to the limited number of physical therapists performing primary care, it is essential that all surveys be completed and returned. If you have misplaced this survey instrument, please contact us and we will immediately forward another copy to you.

Again, the results of this study will enable physical therapists to formally establish and validate their role in Primary Care.

Please complete and return the survey in the self-addressed, stamped envelope by February 19, 2001 to Robert E. DuVall, PT, MMSc, OCS, 2645 Wilshire Terrace Lawrenceville, GA 30044. Please call if you have questions.

Sincerely,

Robert E. DuVall, PT, MMSc, OCS,
MTC, PCC, CSCS, Doctoral Student
University of St. Augustine
St. Augustine, FL 32086
Phone: (770) 985-1010
Fax: (770) 978-3360
Email: robertduvall@sprintmail.com

Edsen B. Donato, PT, MPT, OCS, CHT
Doctoral Candidate
Loma Linda University
Loma Linda, CA 92354
Phone: (909) 478-0069
Fax: (909) 478-0069
Email: edonato1@aol.com

APPENDIX F: CORRESPONDENCE

Memorandum

TO: Army Physical Therapists
FROM: Bob DuVall, PT, MMSc, OCS
Doctoral Student, University of St Augustine
Edsen Donato, PT, MPT, OCS, CHT
Doctoral Candidate, Loma Linda University
DATE: January 8, 2001
RE: Call for Survey Participation

The following memo is written to request your participation in a scientific practice analysis of Primary Care Physical Therapy (PCPT).

The leadership role Army Physical Therapists have assumed with regards to the Primary Care practice model necessitates your knowledge, skills, and abilities to formally establish and validate the physical therapist's role in Primary Care. Results of this survey are expected to provide professional direction to institutions and individuals in entry-level, post-professional, and residency-based educational settings. Competencies surveyed in this study have been developed by a National Advisory Committee who includes COL Nancy Henderson, Col Gail Deyle, LTC Timothy Flynn, LTC Deborah Stetts and numerous retired Army Physical Therapists.

Due to the limited number of PCPTs, our sample size is small so it is extremely important that we have your input represented. We will administer the survey (via regular mail) in January 2001. It will take 45-50 minutes to fill out the survey. Surveys are to be returned in the provided self-addressed, stamped envelope by February 19, 2001. Your willingness to participate will be acknowledged by forwarding your regular mailing address to my email address: < robertduvall@sprintmail.com >. Confidentially is assured, as your name will never be placed on the questionnaire.

The results of this survey will help shape the future of Physical Therapy practice. Your unique and valuable participation is greatly appreciated.

APPENDIX F: CORRESPONDENCE

Memorandum

TO: Kaiser Primary Care Physical Therapists
FROM: Bob DuVall, PT, MMSc, OCS
Doctoral Student, University of St Augustine
Edsen Donato, PT, MPT, OCS, CHT
Doctoral Candidate, Loma Linda University
DATE: January 23, 2001
RE: Call for PCPT Survey Participation

The following memo is written to request your participation in a scientific practice analysis of Primary Care Physical Therapy (PCPT).

The leadership role Kaiser Physical Therapists have assumed with regards to the Primary Care practice model necessitates your knowledge, skills, and abilities to formally establish and validate the physical therapist's role in Primary Care. Results of this survey are expected to provide professional direction to institutions and individuals in entry-level, post-professional, and residency-based educational settings. Competencies surveyed in this study have been developed by a National Advisory Committee that includes Kaiser's Joe Godges, PT, MA, OCS.

Due to the limited number of PCPTs, our sample size is small so it is extremely important that we have your input represented. We will administer the survey (via regular-mail) in January 2001. It will take 45-50 minutes to fill out the survey. Surveys are to be returned in the provided self-addressed, stamped envelope by February 19, 2001. Your willingness to participate will be acknowledged by forwarding your regular-mailing address to my email address: < robertduvall@sprintmail.com **>. Confidentially is assured, as your name will never be placed on the questionnaire.**

The results of this survey will help shape the future of Physical Therapy practice. Your unique and valuable participation is greatly appreciated.

APPENDIX F: CORRESPONDENCE

Memorandum

TO: Air Force Physical Therapists
FROM: Bob DuVall, PT, MMSc, OCS
Doctoral Student, University of St Augustine
Edsen Donato, PT, MPT, OCS, CHT
Doctoral Candidate, Loma Linda University
DATE: January 24, 2001
RE: Call for Survey Participation

The following memo is written to request your participation in a scientific practice analysis of Primary Care Physical Therapy (PCPT).

The leadership role Air Force Physical Therapists have assumed with regards to the Primary Care practice model necessitates your knowledge, skills, and abilities to formally establish and validate the physical therapist's role in Primary Care. Results of this survey are expected to provide professional direction to institutions and individuals in entry-level, post-professional, and residency-based educational settings. Competencies surveyed in this study have been developed by a National Advisory Committee.

Due to the limited number of PCPTs, our sample size is small so it is extremely important that we have your input represented. We are administering the survey (via regular-mail) in January 2001. It will take 45-50 minutes to fill out the survey. Surveys are to be returned in the provided self-addressed, stamped envelope by February 19, 2001. Your willingness to participate should be acknowledged by forwarding your regular-mailing address to my email address: < robertduvall@sprintmail.com **>. Confidentially is assured, as your name will never be placed on the questionnaire.**

The results of this survey will help shape the future of Physical Therapy practice. Your unique and valuable participation is greatly appreciated.

APPENDIX F: CORRESPONDENCE

Memorandum

TO: Navy Primary Care Physical Therapists
FROM: Bob DuVall, PT, MMSc, OCS
Doctoral Student, University of St Augustine
Edsen Donato, PT, MPT, OCS, CHT
Doctoral Candidate, Loma Linda University
DATE: January 26, 2001
RE: Call for PCPT Survey Participation

The following memo is written to request your participation in a scientific practice analysis of Primary Care Physical Therapy (PCPT).

The leadership role Navy Physical Therapists have assumed with regards to the Primary Care practice model necessitates your knowledge, skills, and abilities to formally establish and validate the physical therapist's role in Primary Care. Results of this survey are expected to provide professional direction to institutions and individuals in entry-level, post-professional, and residency-based educational settings. Competencies surveyed in this study have been developed by a National Advisory Committee who include active duty and retired military Physical Therapists.

Due to the limited number of PCPT's, our sample size is small so it is extremely important that we have your input represented. We will administer the survey (via regular-mail) in January 2001. It will take 45-50 minutes to fill out the survey. Surveys are to be returned in the provided self-addressed, stamped envelope by February 19, 2001. Your willingness to participate will be acknowledged by forwarding your regular-mailing address to my email address: < robertduvall@sprintmail.com **>. Confidentially is assured, as your name will never be placed on the questionnaire.**

The results of this survey will help shape the future of Physical Therapy practice. Your unique and valuable participation is greatly appreciated.

APPENDIX F: CORRESPONDENCE

February 9, 2001

Dear Physical Therapist:

You were recently sent a practice analysis survey that will help shape the future of Physical Therapy. Due to the limited number of physical therapists sampled, it is essential that all surveys be completed and returned. If you have misplaced this survey instrument, please contact us and we will immediately forward another copy to you.
Again, the results of this study will enable physical therapists to formally establish and validate their role.

Please complete and return the survey in the self-addressed, stamped envelope by February 19, 2001 to Robert E. DuVall, PT, MMSc, OCS, 2645 Wilshire Terrace Lawrenceville, GA 30044. Please call if you have questions.

Robert E. DuVall, PT, MMSc, OCS,
MTC, PCC, CSCS, Doctoral Student
University of St. Augustine
Phone: (770) 985-1010
Fax: (770) 978-3360
Email: robertduvall@sprintmail.com

Edsen B. Donato, PT, MPT, OCS, CHT
Doctoral Candidate
Loma Linda University
Phone: (909) 478-0069
Fax: (909) 478-0069
Email: edonato1@aol.com

APPENDIX F: CORRESPONDENCE

Email Correspondence

February 23, 2001

Dear Primary Care Physical Therapist:

You were recently sent a practice analysis survey (via electronic mail) that will help shape the future of Primary Care Physical Therapy (PCPT). Due to the limited number of physical therapists sampled, it is essential that all surveys be completed and returned. Please be advised, it is extremely important that you rate the Level Of Importance of each task regardless of whether you perform the task (e.g., if you answered "NO" to any of the items in Parts I and II, you should STILL rate the Level Of Importance of the items).

In case you have misplaced the survey instrument, I have attached another copy of the survey in this email. You may answer it directly on your computer and send it back to me via attached email: edonato1@aol.com

Again, the results of this study will enable physical therapists to formally establish and validate their role in Primary Care.

If you have already completed and returned the survey, please reply to this email by writing "ALREADY SENT" in your response.

In behalf of my fellow colleague, Bob DuVall, PT, MMSc, OCS, thank you for all your support and participation.

Sincerely,

Edsen Donato, PT, MPT, OCS, CHT

APPENDIX F: ADVERTISEMENT

CSM 2001

ATTENTION:

PRIMARY CARE AND/OR DIRECT ACCESS

PHYSICAL THERAPISTS

IF YOU ARE CURRENTLY PROVIDING FULL/PART TIME PHYSICAL THERAPY SERVICES IN A DIRECT ACCESS OR PRIMARY CARE DELIVERY MODEL, IT IS IMPERATIVE THAT WE GET YOUR INPUT!

PRIMARY CARE PHYSICAL THERAPY IS AN EVOLVING ROLE FOR PHYSICAL THERAPISTS. IT IS CURRENTLY BEING DEFINED BY A FORMAL PRACTICE ANALYSIS RESEARCH SURVEY, WHICH HAS BEEN DEVELOPED BY A NATIONAL ADVISORY COMMITTEE OF SUBJECT MATTER EXPERTS.

THE PURPOSE OF THE SURVEY IS TO IDENTIFY THE PHYSICAL THERAPIST'S ROLE AND FUNCTION IN THE PRIMARY CARE SETTING.

YOUR PARTICIPATION IN THIS SURVEY WILL SHAPE THE FUTURE OF PRIMARY CARE PHYSICAL THERAPY.

DATA COLLECTION IS CURRENTLY UNDERWAY AND WILL END IN A FEW DAYS. THEREFORE, WE HIGHLY ENCOURAGE YOU TO RESPOND NOW.

PLEASE CONTACT BOB DUVALL, PT, MMSc, OCS, AT (678) 362-9849 FOR A COPY OF THE WRITTEN SURVEY QUESTIONNAIRE WHICH WILL TAKE APPROXIMATELY 45 MINUTES TO COMPLETE.

THANK YOU.

BOB DUVALL, PT, MMSc, OCS
EDSEN DONATO, PT, MPT, OCS, CHT
JOE GODGES, PT, MA, OCS