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Analysis of Practice for the Physical Therapy Profession: Report Memo 2019

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Analysis of Practice for the Physical Therapy Profession: Report Memo 2019

Background and Executive Summary

This memo summarizes the process and results of the analysis of practice for the physical therapy profession conducted by the Federation of State Boards of Physical Therapy (FSBPT) in partnership with the Human Resources Research Organization (HumRRO) and FSBPT's Exam Committee Chairs. The study documented in this memo was conducted between January and July 2019 and represents the second data collection cycle in the multi-year practice analysis methodology extending to 2021.

Annual data collection and analysis enables FSBPT to (a) monitor on-going and emerging trends in entry-level requirements, (b) respond quickly to changes in the profession that necessitate adjustments to the licensure examinations (e.g., removing test questions that assess skill areas of decreasing importance; increasing the numbers of test questions that assess skill areas of increasing importance), and (c) enhance awareness among current and prospective PTs and PTAs of what FSBPT is and the services it provides.

The approach to conduct the analysis of physical therapy practice in 2019 was similar to that taken in 2018, with the main exception being the examination of trends overtime since 2016 (see Caramagno, 2018; Caramagno, Cogswell, & Waugh, 2018a; Caramagno, Cogswell, & Waugh, 2018b).

- In February and March of 2019, FSBPT collected input on the 2018 lists of work activities (WAs) and knowledge and skill requirements (KSRs) from the Exam Committee Chairs.
- HumRRO used this input to prepare an electronic survey to gather importance ratings of the WAs and KSRs from a large sample of PTs and PTAs across North America. The survey had two sections: a set of questions about the demographic characteristics of the sample and a set of WAs or KSRs that respondents evaluated using a five-point Likert-type rating scale.
- HumRRO analyzed the response data and compiled the results in summary tables and charts.
- FSBPT convened a one-day, in-person meeting on July 12, 2019 with HumRRO and the Exam Committee Chairs to review the results and obtain recommendations for the remaining cycles of the multi-year methodology. The results and recommendations are described in detail in this report.

Summary of Practice Analysis Survey Changes

Below we describe the survey changes that took place between the 2016, 2018, and 2019 studies. For the current iteration of the practice analysis, HumRRO examined trends over time since 2016. The work activities (WAs) and knowledge and skill requirements (KSRs) remained largely consistent across the three practice analysis studies; however, all results regarding trends overtime should be interpreted in light of the minor changes/updates made to the survey since 2016. These are detailed below.

Background Questionnaire: Changes from 2016 to 2018

- Added a gated-entry item to confirm respondents' motivation to provide thoughtful responses (question must be answered to complete the rest of the survey).
 - Please acknowledge the importance of this survey to the profession by entering your initials next to the statement below. A response is required to continue.
- Added a question to assess number of jobs/positions held in the past 12 months.
 - How many physical therapist (physical therapist assistant) positions/jobs have you held in the past 12 months?
 - 1
 - 2 to 3
 - 4 to 5
 - 6 to 7
 - More than 7
- Re-sorted the responses for question 12 regarding time in each facility to group similar facilities together instead of grouping alphabetically.
- Revised question 17 to clarify quality of experience supervising PTAs over the past 12 months.
 - 2016 version: On average, do you supervise the work of PTAs more than PTs?
 - Yes
 - No
 - 2018 version: Which of these statements is true regarding your experience supervising PTAs over the past 12 months?
 - I routinely supervise PTAs and have a good understanding of the knowledge and skills they need to provide safe and effective care.
 - I do NOT routinely supervise PTAs and/or I do NOT have a good understanding of the knowledge and skills they need to provide safe and effective care.

Background Questionnaire: Changes from 2018 to 2019

- Revised question 12 to reflect differences in skilled nursing facilities, long-term acute care facilities, and assisted living facilities.
 - 2018 version: What percentage of your time over the past 12 months was spent working in: Skilled Nursing Facility (SNF)/Long-term Care/Assisted Living Facility?
 - 2019 version:
 - What percentage of your time over the past 12 months was spent working in: Skilled Nursing Facility (SNF)?

- What percentage of your time over the past 12 months was spent working in: Assisted Living Facility (ALF)?
- What percentage of your time over the past 12 months was spent working in: Long-Term Acute Care (LTAC)?
- Revised questions 13 and 14 to remove redundancies related to the assessment of direct patient care and to allow for identification of additional responsibilities PTs/PTAs have when their principal area of responsibility is direct patient care.
 - In 2018, direct patient care was assessed on two items:
 - Question 13. For the facility in which you work the most, what is your PRINCIPAL area of responsibility? [“direct patient care” was one of the response options]
 - Question 14. Approximately what percentage of your time over the past 12 months was spent in direct patient care?
 - In 2019, we swapped the sequence of questions 13 and 14 and removed direct patient care as a response to the question “For the facility in which you work the most, what is your PRINCIPAL area of responsibility?”
- In 2019, there was a survey programming error on Question 14 on the PT KSR survey only. The response option “Administration/Management” was unintentionally omitted from the question: For the facility in which you work the most, what is your PRINCIPAL area of responsibility?
- Revised question 17 on the PT surveys for comprehensiveness.
 - 2018 version: Which of these statements is true regarding your experience supervising PTAs over the past 12 months?
 - I routinely supervise PTAs and I have a good understanding of the knowledge and skills they need to provide safe and effective care.
 - I do NOT routinely supervise PTAs and/or I do NOT have a good understanding of the knowledge and skills they need to provide safe and effective care.
 - 2019 version: Which of these statements is true regarding your experience supervising PTAs over the past 12 months?
 - I routinely supervise PTAs and I have a good understanding of the knowledge and skills they need to provide safe and effective care.
 - I routinely supervise PTAs but I do NOT have a good understanding of the knowledge and skills they need to provide safe and effective care.
 - I do NOT routinely supervise PTAs and/or I do NOT have a good understanding of the knowledge and skills they need to provide safe and effective care.

WA and KSR Rating Scales: Changes from 2016 to 2018

- Removed WA frequency scale – provides limited additional information beyond that obtained from the importance ratings and increases burden on respondents.
- Added a frequency scale point to the WA importance scale (i.e., *I have not performed this WA*).
- Removed scale point 0 *Knowledge is not needed* from the KSR importance scale because it provides redundant information with scale point 1 *Not important*.
- Revised KSR importance stem to emphasize to the respondents that they should provide an assessment of the importance to effective care rather than the importance to the job in general.

WA and KSR Rating Scales: Changes from 2018 to 2019

- “Perform and/or train patient/client in gross motor developmental progression” was added to both the PT and PTA WA surveys.
- Implemented minor wording deletions to clarify the following WAs:
 - Perform peripheral mobilization/~~manipulation~~ (non-thrust)
 - Perform spinal mobilization/~~manipulation~~ (non-thrust)
 - Apply and/or adjust mechanical neuromuscular re-education devices/technologies (e.g., weighted vests, therapeutic suits, body weight supported treadmill, ~~robotic exoskeletons~~)
- Revised KSR items assessing the impact of pharmacology in order to enhance clarity:
 - 2018 version: Pharmacological management of the [system name] system on physical therapy management
 - 2019 version: The impact of pharmacology used to treat the [system name] system on physical therapy management

Sample Selection and Administration

- FSBPT selected participant samples from a list of licensure candidates who had passed the NPTE stratified by exam, year of licensure, and jurisdiction.
- FSBPT sent a pre-invitation notification to all participants on April 9, 2019 describing the purpose of the survey.
- HumRRO conducted a soft launch on April 15, 2019 to test the email campaign programming and survey functionality. The soft launch included approximately 100 invitations for each survey.
- HumRRO sent remaining email invitations starting on April 18, 2019 (i.e., hard launch). Participants and respondents received reminder emails on April 23, 2019 and May 8, 2019.

- The survey closed on May 31, 2019.
- Consistent with the 2018 process, respondents completed either the WA or KSR survey based on their years of professional experience: individuals with two or fewer years of experience were assigned to the WA survey; individuals with three or more years of experience completed the KSR survey. The PT KSR survey also incorporated branching logic to redirect respondents who indicated that they routinely supervise PTAs and have a good understanding of the knowledge and skills PTAs need to provide safe and effective care.

Data Cleaning and Screening

- Examined the raw data to identify outliers and unexpected responses.
- Constructed data filters to screen out careless responder data based on psychometric, structural, and substantive considerations including flat, hasty, and missing response patterns, and ineligible employment status.

Table 1. Data Quality Screens

Data Screen	PT KSR		PTA KSR		PT WA		PTA WA	
	A	B	A	B	A	B	A	B
Flat Responding	43	60	44	82	48	8	53	12
Hasty Responding	3	10	3	3	5	5	3	1
Missing >90% of responses	142	85	63	43	150	117	93	54
Employment Status								
Retired	7	6	6	7	0	0	0	0
Unemployed and <i>not</i> looking for work as a PT or PTA	33	29	50	52	8	9	34	23
Total	216	176	149	174	206	134	165	86

Note. Flat Responding includes individuals who selected the same response value an unreasonably-high number of times in a row. Hasty Responding includes individuals who completed the survey too quickly to have been paying much attention to the survey questions. The values in the “Total” row account for overlap across the data screens and identify the absolute number of cases that were excluded (i.e., no double-counting).

Response Rates and Final Analysis Sample

- Table 2 summarizes the response rates for the 2019 practice analysis surveys.
- The “Responded” count is the number of individuals who started the survey and completed at least the background questions.
- The “Usable” count reflects the number of respondents who provided response data of acceptable quality based on the data screens noted above.
- The final analysis sample included data from 6,115 respondents across all survey forms.

Table 2. Survey Distribution and Response Rates

Sample	Invited	Responded			Usable	
		Form A	Form B	Total		
PT KSR	21,981	1,248	1,212	2,460	2,068	(9%)*
PTA KSR	11,512	845	836	1,681	1,358	(12%)*
PT WA	11,133	1,025	955	1,980	1,640	(15%)
PTA WA	7,178	680	620	1,300	1,049	(15%)

Note. * 340 PT KSR respondents were reassigned to the PTA KSR survey based on responses to the background question regarding supervision of PTAs.

Sample Description and Representativeness

HumRRO computed descriptive statistics for the background questionnaire response data to summarize and examine the representativeness of the sample. Below is a summary of the 2019 practice analysis sample on several key variables. The complete set of results of the background questionnaire are presented in Appendix A.

- Respondents tended to be female (65-71%), White (72-76%), and employed full time (73-90%).
- PT KSR (64%) and PT WA (85%) respondents were more likely to possess a Doctor of Physical Therapy degree (DPT) than the PTA samples who were more likely to possess Associate’s degrees (PTA KSR: 61%; PTA WA: 78%).
- The most common settings that PTs reported spending at least 50% of their time in were private outpatient facilities (25-37%), health system or hospital-based outpatient facilities (23-24%), acute care hospital (11-12%), home health or home care facilities (6-13%), and skilled nursing facilities (10-11%).
- A larger portion of PTAs reported that they spend at least 50% of their time working in skilled nursing facilities (26-30%) compared to PTs (10-11%).
- A majority of PTs and PTAs (59-73%) reported having only one employment position in the past 12 months.
- A clear majority of PTs and PTAs (77-85%) reported spending more than three-quarters of their time in direct patient care.

Work Activity and Knowledge and Skill Requirements: Data Analytic Strategy

Analysis of the WA and KSR survey data involved computing descriptive statistics to examine the distribution and magnitude of respondents’ ratings and interrater agreement indices to evaluate the degree of agreement and consistency in the response sets. Below is a summary of the analytic strategy.

- For each WA statement, HumRRO computed:
 - Sample size: number of valid responses.
 - Percent Perform (%_{Perf}): Sum of responses for scale points 1 through 5, divided by the total number of usable respondents.
 - Percent Important (%_{Imp}): Sum of responses for scale points 2 through 5, divided by the total number of usable respondents.
 - Mean Importance (M): Based on responses for scale points 1 through 5. Mean WA importance ratings exclude respondents who selected the option *I have not performed this WA*.
 - Standard Deviation of Importance (SD): Based on responses for scale points 1 through 5.
- For each KSR statement, HumRRO computed:
 - Sample size: number of valid responses.
 - Percent Important (%_{Imp}): Sum of responses for scale points 2 through 5, divided by the total number of usable respondents.
 - Mean Importance (M): Based on responses for scale points 1 through 5.
 - Standard Deviation of Importance (SD): Based on responses for scale points 1 through 5.
- For each WA and KSR statement, HumRRO computed differences in importance ratings by work setting¹:
 - We conducted independent samples *t* tests to examine differences in importance ratings by work setting. Specifically, importance ratings by PTs and PTAs who spent at least 50% of their time working in a particular setting over the past 12 months were compared to ratings by those who spent less than 50% of their time working in that setting.
 - We reported subgroup analyses only for work settings where greater than 30 PTs and/or PTAs reported spending at least 50% of their time. These settings include: private outpatient facilities, health system or hospital-based outpatient facilities, acute care hospitals, home health or home care facilities and skilled nursing facilities.
- Two types of intraclass correlation coefficients (ICCs; McGraw & Wong, 1996; Shrout & Fleiss, 1979) were computed to estimate the degree of consistency and agreement among the survey respondents.
 - The single rater estimates can be interpreted as the level of consistency (or agreement) to be expected between the ratings provided by any single rater with any other randomly selected single rater.
 - The Observed estimates indicate the degree of consistency (or agreement) to be expected between the average among the sample of survey participants and the average that would be obtained if another random sample were to be drawn from the population.

¹Tables reporting the results of subgroup analyses by work setting were emailed to FSBPT by HumRRO on July 1, 2019 and are not included in this report in order to save space and reduce redundancies.

Table 3. Estimates of Inter-rater Reliability and Agreement

Survey	Form	Number of Items	Type of ICC			
			Consistency		Agreement	
			1-Rater	Observed	1-Rater	Observed
PT KSR	A	75	0.34	>0.99	0.27	>0.99
	B	76	0.51	>0.99	0.40	>0.99
PTA KSR	A	66	0.29	>0.99	0.23	0.99
	B	68	0.45	>0.99	0.35	>0.99
PT WA	A	120	0.37	>0.99	0.31	>0.99
	B	121	0.51	>0.99	0.45	>0.99
PTA WA	A	99	0.30	0.99	0.24	0.99
	B	99	0.46	>0.99	0.40	>0.99

Note. Consistency and agreement ICCs estimated for a single rater (1-Rater) and for the total number of raters (Observed).

Work Activity and Knowledge and Skill Requirements: Results Summary

Descriptive statistics for all PT and PTA WAs and KSRs are presented in Appendix B. Based on the descriptive statistics, HumRRO conducted a further examination of statements that:

- 1) fell at, near, or below a criticality threshold for mean importance,
- 2) increased or decreased in mean importance by greater than 0.50 from 2016 to 2019, and
- 3) were of particular interest to FSBPT given current trends or changes in the field.

Findings for each of these three categories of statements are presented in Appendices B and C and are summarized below. During the July 12th meeting, HumRRO and the Exam Committee Chairs reviewed these statements and discussed professional and methodological issues that could have led to increases or decreases in importance ratings relative to the 2016 and 2018 practice analysis survey results.

- **Statements at, near or below the criticality threshold.** Using the criticality index of 2.5, representing halfway between scale point 2 (Minimally Important) and 3 (Important), HumRRO extracted statements that received mean importance ratings at, near (2.5-3), or below (<2.5) the criticality index (see red and orange highlighting in Appendix B).

Overall, only three PT KSR statements fell below the criticality threshold, indicating relatively low mean importance ratings.² These included:

- Diagnostic electrophysiology (EMG/NCV) using needle insertion
- Physical therapy ultrasound imaging of the genitourinary system
- Applications, indications, contraindications, and precautions of shockwave therapy

None of the PTA KSR statements received mean importance ratings below the criticality threshold.

² Note. Each of these statements fell below the criticality threshold in 2016 and 2018, and were recommended for exclusion by the Task Force in 2016.

Of the WA statements, 18 PT WAs fell below the criticality threshold and 8 PTA WAs fell below the criticality threshold. Across PT and PTA samples, the majority of WA statements falling near or below the criticality threshold were associated with “Integumentary Repair & Protection Techniques” or “Therapeutic Modalities.”

- **Statements with mean differences greater than |0.5|.** HumRRO computed the difference between mean importance ratings across years and highlighted values that indicated an increase or decrease in mean importance of greater than 0.50 (see Appendix C).

Overall, ratings were relatively consistent from 2016 to 2019. KSR statements increasing in importance were typically statements referring to “The impact of pharmacology used to treat the [system name] system on physical therapy management.” Note it is possible these increases are due to the wording changes made for the 2019 data collection cycle versus substantive changes in the field. Those decreasing in importance were statements referring to therapeutic modalities: “Applications, indications, contraindications, and precautions of: [modality name].”

In terms of WAs, two PT WAs increased in mean importance from 2016 to 2019 and one decreased in importance by greater than |0.5|:

- Interpret each of the following types of data to determine the need for intervention or the response to intervention: Neuromuscular system (+0.61)
- Perform dry needling (+0.64)
- Perform and/or train patient/client/caregiver in ultrasound procedures (-0.59)

Three PTA WAs increased in mean importance by greater than |0.5| from 2016 to 2019:

- Apply taping for neuromuscular reeducation (+0.83)
- Apply taping for pain management (+0.89)
- Educate the healthcare team about safe patient handling (e.g., injury prevention, ergonomics, use of equipment) (+0.50)

Whereas it is likely KSR changes are due to survey revisions, WA changes over time may represent more substantive changes in the field and will be monitored over time to support decision-making on behalf of FSBPT and its stakeholders.

- **Selected WAs and KSRs:** FSBPT indicated special interest in tracking specific WAs and KSRs overtime due to relevant changes and trends in the physical therapy field. These included:
 - PT and PTA therapeutic modalities
 - Impact of regenerative medicine
 - Dry needling
 - Ultrasound for diagnosis versus Intervention
 - Diathermy by work setting

Figures 1 and 2 (next page) depict mean importance ratings from 2016 to 2019 for each of the PT and PTA therapeutic modalities. Although there were decreases in importance ratings for each modality from 2016 to 2018, the PT and PTA importance ratings were largely consistent from 2018 to 2019, with slight increases for PT modalities.

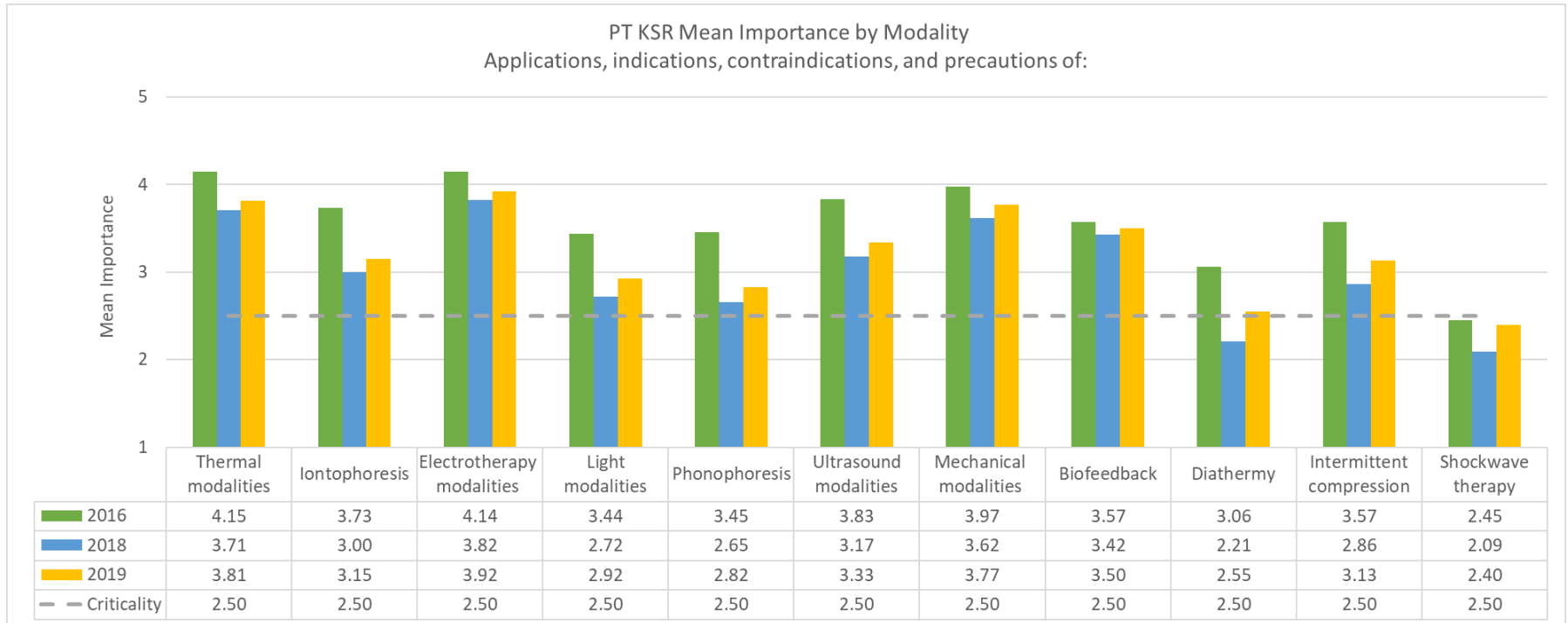


Figure 1. PT KSR Mean Importance by Modality

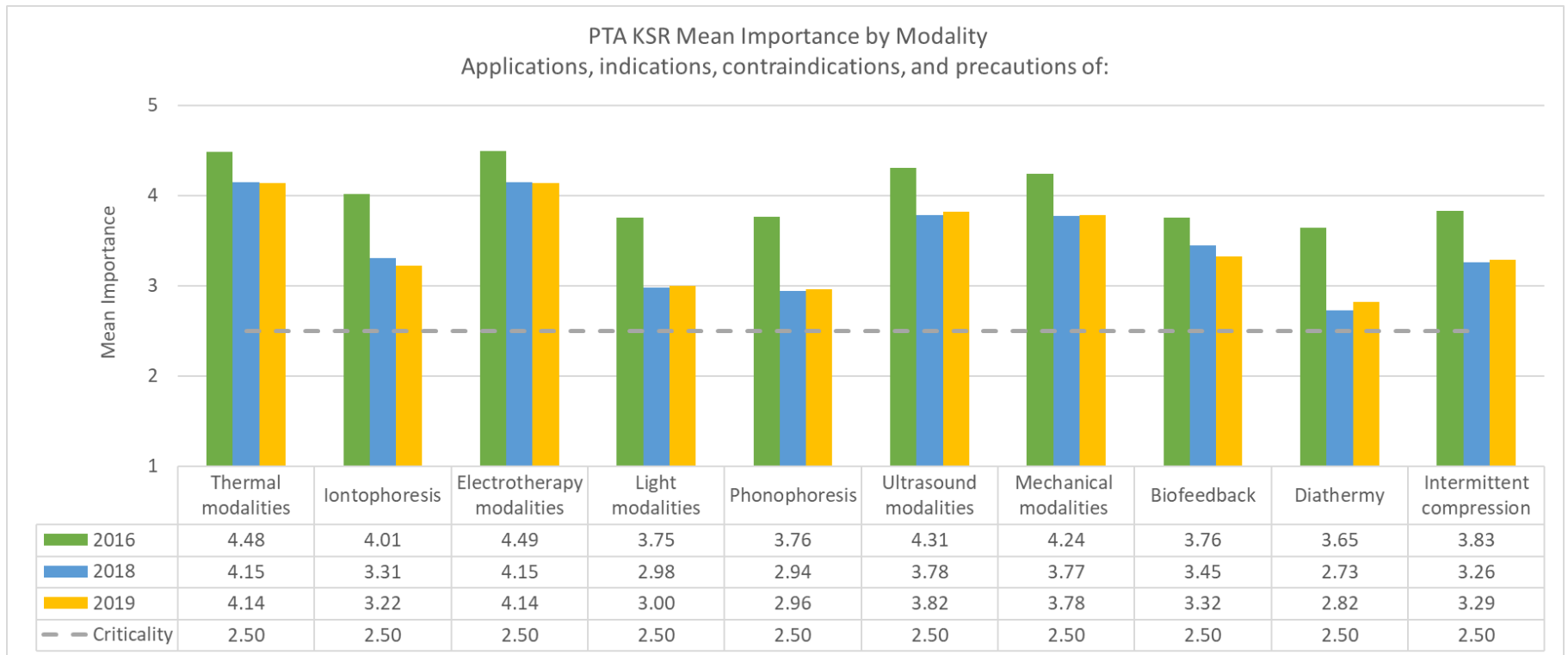


Figure 2. PTA KSR Mean Importance by Modality

Figure 3 depicts mean importance ratings from 2016 to 2019 for WAs and KSRs related to the impact of regenerative medicine, dry needling, and ultrasound for diagnosis versus intervention. Overall, importance ratings for the impact of regenerative medicine have slightly (but consistently) increased from 2016 to 2019. Importance ratings for dry needling increased between 2016 and 2018 but remained stable in 2019. The results for statements related to ultrasound modalities and procedures showed greater variability. Knowledge of applications, indications, contraindications, and precautions of ultrasound modalities showed less stability between 2016, 2018, and 2019. In contrast, ratings for the WA statements associated with ultrasound procedures have remained relatively low (at or below the criticality threshold) for the past three practice analysis cycles.

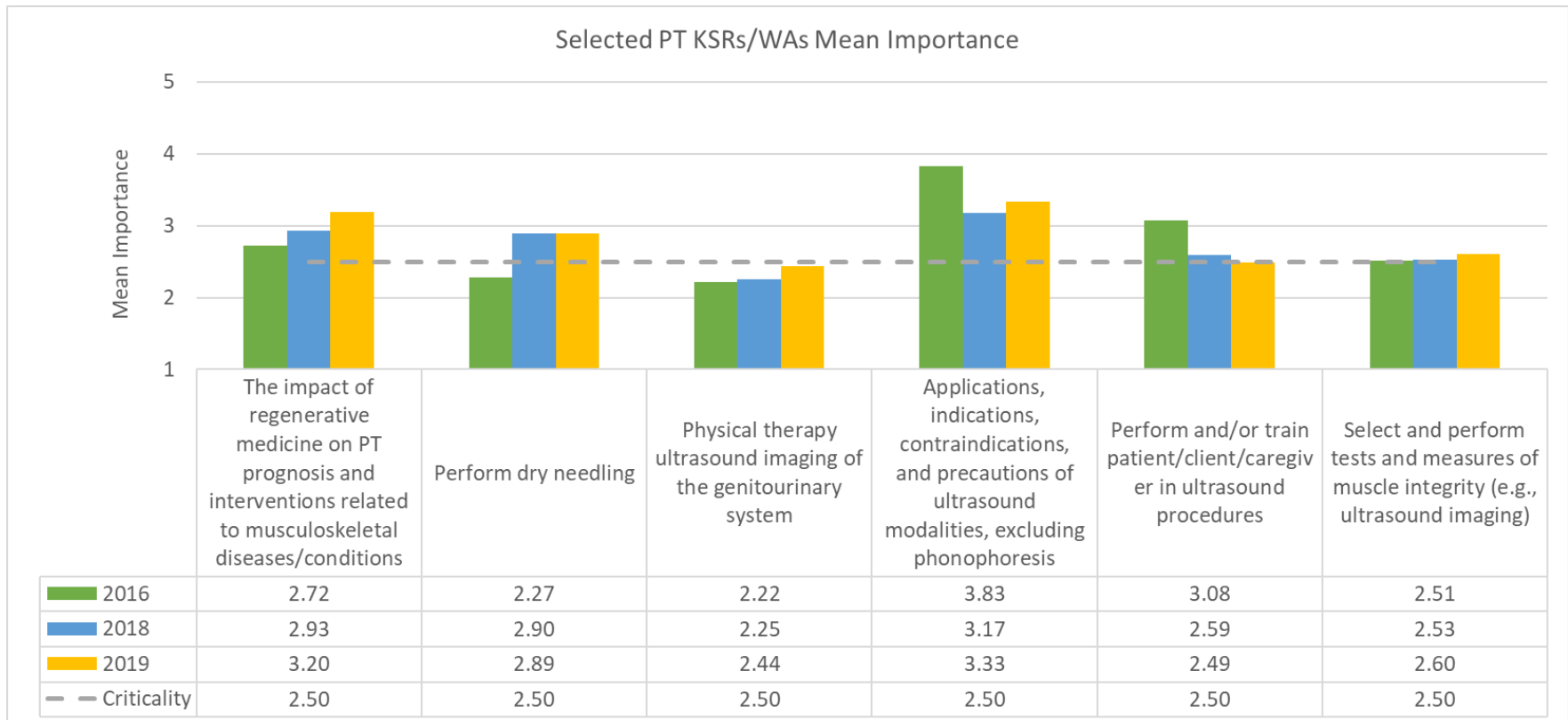


Figure 3. Selected PT KSRs/WAs Mean Importance

Figures 4a-4d (next pages) depict mean importance ratings for 2018 and 2019 for diathermy by work setting. A clear pattern emerged indicating diathermy was rated as more important for PTs and PTAs working in skilled nursing facilities (SNFs) relative to the other work settings. Specifically, mean importance ratings for knowledge of “Applications, indications, contraindications, and precautions of diathermy” reported by PTs who work at least 50% of the time in SNFs increased from 2018 to 2019 by nearly a scale point (0.87). Additionally, subgroup analyses demonstrated the 2019 mean importance ratings for this KSR were significantly higher for PTs who work in SNFs at least 50% of the time ($M = 3.61, SD = 1.33$) compared to those who do not ($M = 2.42, SD = 1.24$), $d = 0.95, p < .001$.³ Similarly, mean importance ratings for the WA statement, “Perform and/or train patient/client/caregiver in diathermy”, were significantly higher for both PTs ($M = 3.18, SD = 1.35$) and PTAs ($M = 3.08, SD = 1.38$) who work in SNFs at least 50% of the time compared to those who do not (PT $M = 1.74, SD = 1.14$; PTA $M = 2.47, SD = 1.48$), $ds = 1.22$ (PT) and $.43$ (PTA), $ps < .001$.³

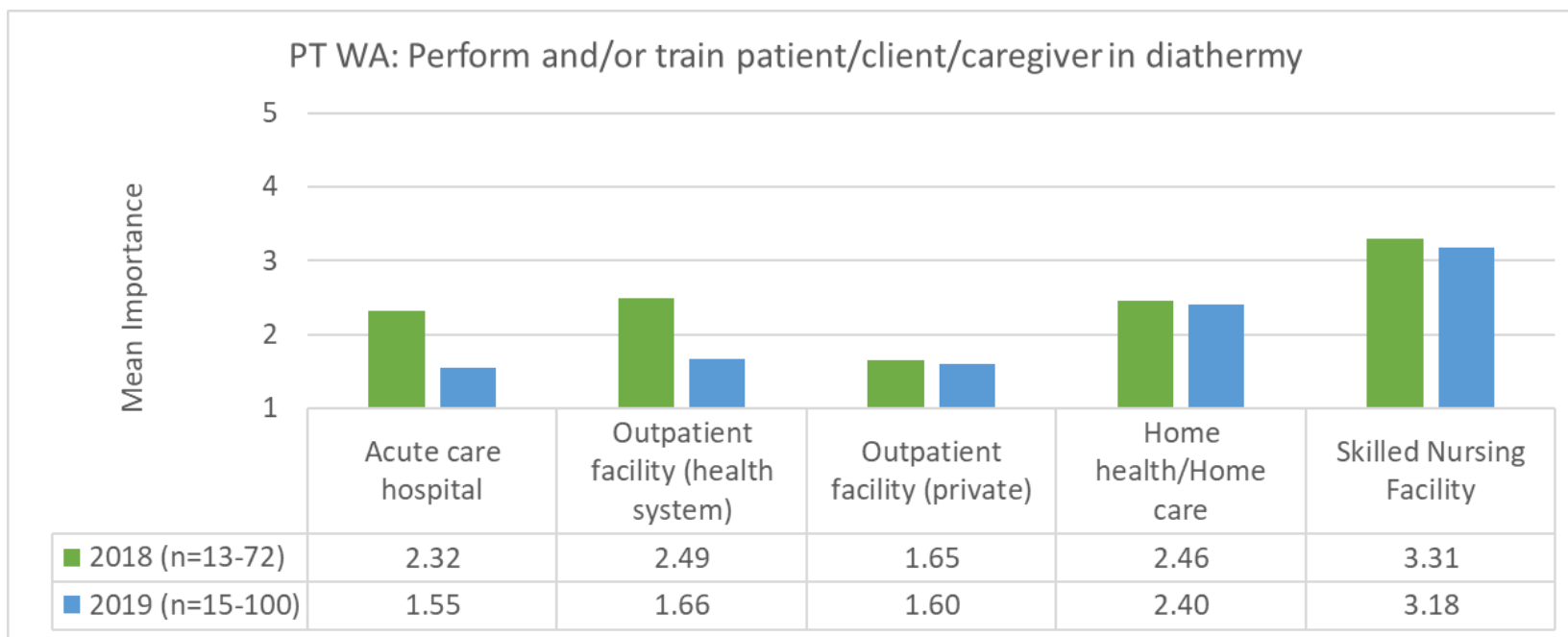


Figure 4a. Diathermy by Work Setting: PT WA

³ These statistics can be found in the full subgroup analyses results tables that were emailed to FSBPT by HumRRO on July 1, 2019.

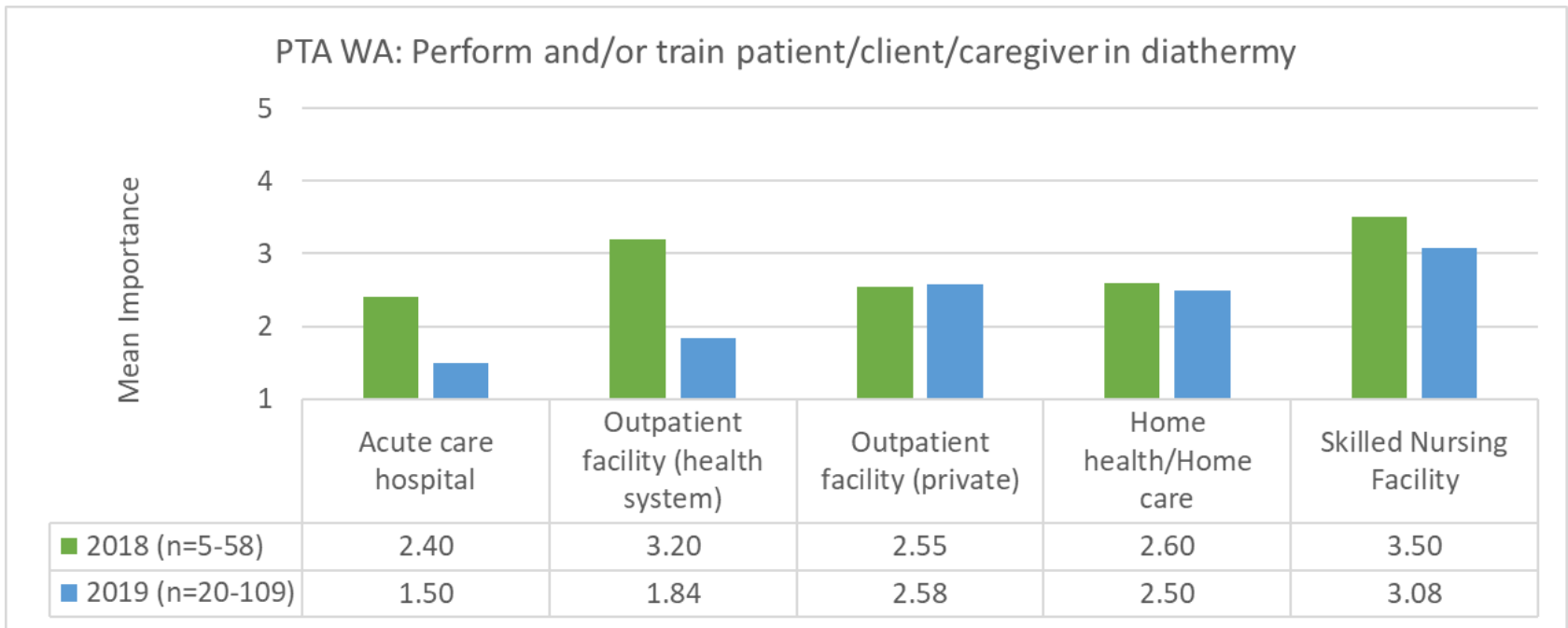


Figure 4b. Diathermy by Work Setting: PTA WA

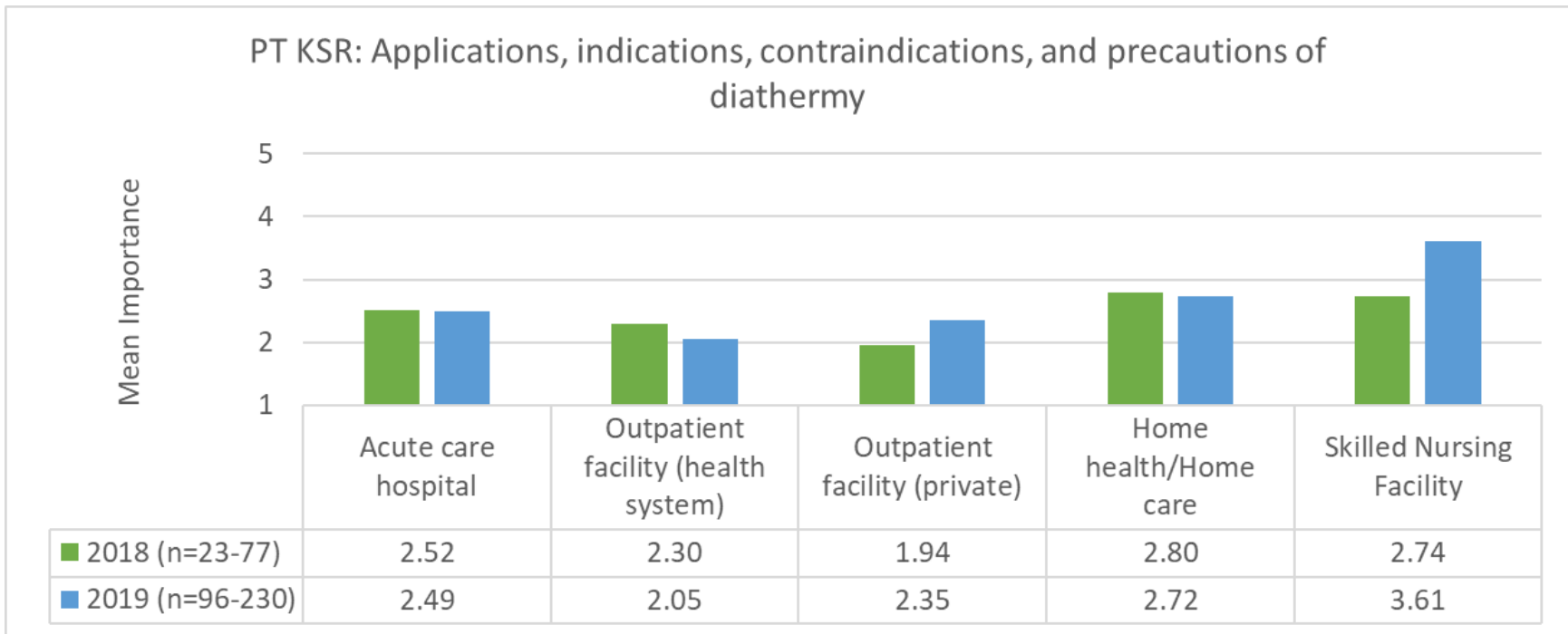


Figure 4c. Diathermy by Work Setting: PT KSR

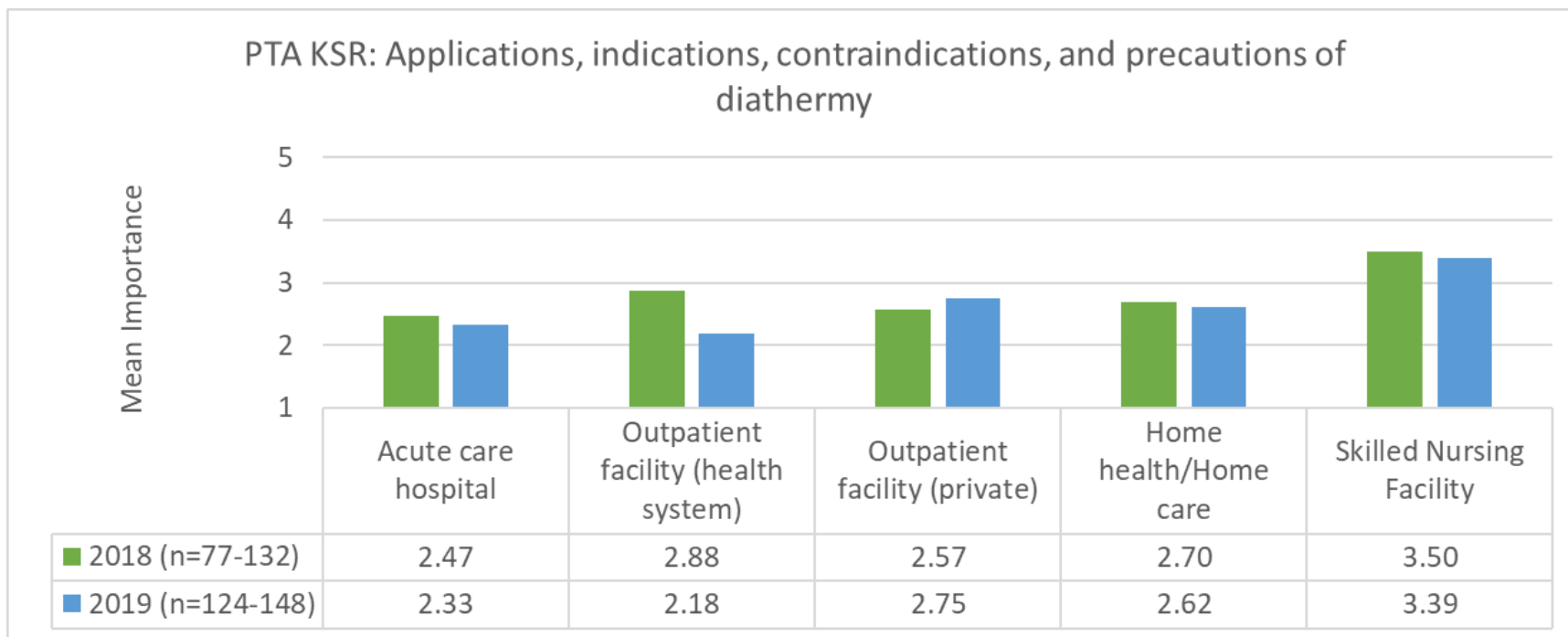


Figure 4d. Diathermy by Work Setting: PTA KSR

Recommendations for Future Practice Analysis Survey Cycles

HumRRO solicited feedback on the above results and the overall job analysis process from FSBPT and the Exam Committee Chairs. Their feedback and recommendations included:

- Add postural drainage as a specific item to the Work Activities survey.
- Continue to track trends overtime in KSRs and WAs in order to inform decisions regarding their inclusion and exclusion on the exam.
- Examine trends in demographic characteristics overtime (e.g., respondents spending at least 50% of time in selected work settings).
- If possible, obtain population demographic characteristics to enable comparisons with the survey samples. FSBPT noted that no known database containing a comprehensive profile of the population of PTs and PTAs exists.

References

- Caramagno, J. P. (2018). *Analysis of Practice for the Physical Therapy Profession: Report Memo 2018* (No. 051). Alexandria, VA: Human Resources Research Organization.
- Caramagno, J. P., Cogswell, S., & Waugh, G. (2016a). *Analysis of practice for the physical therapy profession: Entry-level physical therapists* (FR16-83). Alexandria, VA: Human Resources Research Organization.
- Caramagno, J. P., Cogswell, S., & Waugh, G. (2016b). *Analysis of practice for the physical therapy profession: Entry-level physical therapist assistants* (FR16-84). Alexandria, VA: Human Resources Research Organization.
- McGraw, K. O., & Wong, S. P. (1996). Forming inferences about some intraclass correlation coefficients. *Psychological Methods*, 1, 30-46.
- Shrout, P. E., & Fleiss, J. L. (1979). Intraclass correlations: Uses in assessing rater reliability. *Psychological Bulletin*, 86, 420-428.

Appendix A. Summary of Background Questionnaire Responses

Table A1. Descriptive Statistics for the 2019 Background Questionnaire

Question	Count				Percent				
	PT KSR	PTA KSR	PT WA	PTA WA	PT KSR	PTA KSR	PT WA	PTA WA	
Q1 What is your gender?									
I prefer not to respond	29	34	10	10	1.4	2.5	0.6	1.0	
Female	1,384	963	1,063	721	66.9	70.9	64.8	68.7	
Male	519	295	478	268	25.1	21.7	29.1	25.5	
[other]	1	1	1	1	0.0	0.1	0.1	0.1	
Q2 Are you Hispanic or Latino?									
I prefer not to respond	50	48	22	27	2.4	3.5	1.3	2.6	
Yes	89	84	87	92	4.3	6.2	5.3	8.8	
No	1,831	1,167	1,477	897	88.5	85.9	90.1	85.5	
Q3 What is your race?									
I prefer not to respond	90	83	47	48	4.4	6.1	2.9	4.6	
American Indian or Alaska Native	11	14	11	14	0.5	1.0	0.7	1.3	
Asian	350	131	285	103	16.9	9.6	17.4	9.8	
Black or African American	58	52	40	40	2.8	3.8	2.4	3.8	
Native Hawaiian or Other Pacific Islander	14	5	16	8	0.7	0.4	1.0	0.8	
White	1,487	1,027	1,214	801	71.9	75.6	74.0	76.4	
[other]	33	36	42	40	1.6	2.7	2.6	3.8	
Q4 What is the highest academic degree related to physical therapy that you have earned?									
Certificate	1	1	0	0	0.0	0.1	0.0	0.0	
Associate's	0	823	0	814	0.0	60.6	0.0	77.6	
Bachelor's	235	177	113	184	11.4	13.0	6.9	17.5	
Master's	408	73	82	18	19.7	5.4	5.0	1.7	
Doctor of Physical Therapy (DPT)	1,332	249	1,401	5	64.4	18.3	85.4	0.5	
Doctoral degree (PhD, EdD, clinical doctorate, or other)	27	5	8	1	1.3	0.4	0.5	0.1	
[other]	20	8	13	5	1.0	0.6	0.8	0.5	
Q5 Where did you complete your entry-level physical therapy education?									
United States	1,674	1,235	1,372	972	80.9	90.9	83.7	92.7	
Canada	12	1	3	1	0.6	0.1	0.2	0.1	
Egypt	7	0	11	1	0.3	0.0	0.7	0.1	
India	71	21	71	25	3.4	1.5	4.3	2.4	
Philippines	199	65	108	22	9.6	4.8	6.6	2.1	
South Korea	7	1	5	0	0.3	0.1	0.3	0.0	
United Kingdom	10	2	2	0	0.5	0.1	0.1	0.0	
[other]	45	10	45	10	2.2	0.7	2.7	1.0	

(continued)

Table A1. Descriptive Statistics for the 2018 Background Questionnaire (continued)

Question	Count				Percent			
	PT KSR	PTA KSR	PT WA	PTA WA	PT KSR	PTA KSR	PT WA	PTA WA
Q6 In what year were you FIRST licensed as a physical therapist in the United States, the District of Columbia, U.S. Virgin Islands, or Puerto Rico?								
Not selected	2	4	5	1	0.1	0.3	0.3	0.1
1955-1959	0	0	0	0	0.0	0.0	0.0	0.0
1960-1969	0	0	0	0	0.0	0.0	0.0	0.0
1970-1979	0	2	0	0	0.0	0.1	0.0	0.0
1980-1989	4	2	1	0	0.2	0.1	0.1	0.0
1990-1999	270	168	0	1	13.1	12.4	0.0	0.1
2000-2009	898	471	0	3	43.4	34.7	0.0	0.3
2010-2019	894	711	1,634	1,044	43.2	52.4	99.6	99.5
Q7 In which one of the following United States physical therapy jurisdictions do you currently have your PRIMARY clinical work setting?								
Not selected	10	6	20	4	0.5	0.4	1.2	0.4
Alabama	16	26	7	15	0.8	1.9	0.4	1.4
Alaska	7	3	8	5	0.3	0.2	0.5	0.5
Arizona	40	26	37	20	1.9	1.9	2.3	1.9
Arkansas	12	20	13	16	0.6	1.5	0.8	1.5
California	176	72	153	54	8.5	5.3	9.3	5.1
Colorado	52	25	43	22	2.5	1.8	2.6	2.1
Connecticut	21	9	24	10	1.0	0.7	1.5	1.0
District of Columbia (Washington)	13	1	6	2	0.6	0.1	0.4	0.2
Delaware	11	5	8	5	0.5	0.4	0.5	0.5
Florida	74	66	53	59	3.6	4.9	3.2	5.6
Georgia	54	38	34	17	2.6	2.8	2.1	1.6
Guam	2	1	0	1	0.1	0.1	0.0	0.1
Hawaii	12	5	6	5	0.6	0.4	0.4	0.5
Idaho	13	7	10	12	0.6	0.5	0.6	1.1
Illinois	95	43	70	49	4.6	3.2	4.3	4.7
Indiana	49	54	41	17	2.4	4.0	2.5	1.6
Iowa	19	10	11	18	0.9	0.7	0.7	1.7
Kansas	15	15	13	7	0.7	1.1	0.8	0.7
Kentucky	17	35	27	23	0.8	2.6	1.6	2.2
Louisiana	34	13	10	13	1.6	1.0	0.6	1.2
Maine	8	9	8	3	0.4	0.7	0.5	0.3
Maryland	46	26	44	29	2.2	1.9	2.7	2.8
Massachusetts	46	25	47	23	2.2	1.8	2.9	2.2
Michigan	50	49	41	39	2.4	3.6	2.5	3.7
Minnesota	55	25	45	24	2.7	1.8	2.7	2.3

(continued)

Table A1. Descriptive Statistics for the 2018 Background Questionnaire (continued)

Question	Count				Percent				
	PT KSR	PTA KSR	PT WA	PTA WA	PT KSR	PTA KSR	PT WA	PTA WA	
Q7 (continued) In which one of the following United States physical therapy jurisdictions do you currently have your PRIMARY clinical work setting?									
Mississippi	11	13	14	14	0.5	1.0	0.9	1.3	
Missouri	29	28	35	25	1.4	2.1	2.1	2.4	
Montana	6	5	1	5	0.3	0.4	0.1	0.5	
Nebraska	16	20	10	15	0.8	1.5	0.6	1.4	
Nevada	19	9	23	10	0.9	0.7	1.4	1.0	
New Hampshire	22	13	10	3	1.1	1.0	0.6	0.3	
New Jersey	150	53	54	12	7.3	3.9	3.3	1.1	
New Mexico	11	7	12	6	0.5	0.5	0.7	0.6	
New York	156	71	161	66	7.5	5.2	9.8	6.3	
North Carolina	50	30	51	20	2.4	2.2	3.1	1.9	
North Dakota	7	2	10	1	0.3	0.1	0.6	0.1	
Northern Mariana Islands	0	0	0	0	0.0	0.0	0.0	0.0	
Ohio	56	37	45	52	2.7	2.7	2.7	5.0	
Oklahoma	13	17	13	13	0.6	1.3	0.8	1.2	
Oregon	28	21	24	10	1.4	1.5	1.5	1.0	
Pennsylvania	81	53	78	59	3.9	3.9	4.8	5.6	
Puerto Rico	0	0	0	0	0.0	0.0	0.0	0.0	
Rhode Island	4	3	7	4	0.2	0.2	0.4	0.4	
South Carolina	39	37	23	17	1.9	2.7	1.4	1.6	
South Dakota	7	7	2	2	0.3	0.5	0.1	0.2	
Tennessee	35	34	23	29	1.7	2.5	1.4	2.8	
Texas	171	132	100	92	8.3	9.7	6.1	8.8	
U.S. Virgin Islands	2	0	0	0	0.1	0.0	0.0	0.0	
Utah	9	16	15	8	0.4	1.2	0.9	0.8	
Vermont	4	1	3	1	0.2	0.1	0.2	0.1	
Virginia	62	37	33	27	3.0	2.7	2.0	2.6	
Washington	35	32	33	11	1.7	2.4	2.0	1.0	
West Virginia	10	10	6	8	0.5	0.7	0.4	0.8	
Wisconsin	32	26	37	29	1.5	1.9	2.3	2.8	
Wyoming	4	4	8	2	0.2	0.3	0.5	0.2	

(continued)

Table A1. Descriptive Statistics for the 2018 Background Questionnaire (continued)

Question	Count				Percent				
	PT KSR	PTA KSR	PT WA	PTA WA	PT KSR	PTA KSR	PT WA	PTA WA	
Q8 In which of the following United States physical therapy jurisdictions are you currently licensed (percentages may sum to more than 100%)?									
Alabama	17	29	9	20	0.8	2.1	0.5	1.9	
Alaska	13	5	14	5	0.6	0.4	0.9	0.5	
Arizona	50	33	48	21	2.4	2.4	2.9	2.0	
Arkansas	14	27	15	17	0.7	2.0	0.9	1.6	
California	212	82	169	61	10.3	6.0	10.3	5.8	
Colorado	72	32	55	26	3.5	2.4	3.4	2.5	
Connecticut	27	13	35	12	1.3	1.0	2.1	1.1	
District of Columbia (Washington)	19	2	6	2	0.9	0.1	0.4	0.2	
Delaware	18	8	16	7	0.9	0.6	1.0	0.7	
Florida	99	86	67	64	4.8	6.3	4.1	6.1	
Georgia	67	48	40	20	3.2	3.5	2.4	1.9	
Guam	2	1	0	0	0.1	0.1	0.0	0.0	
Hawaii	22	7	8	5	1.1	0.5	0.5	0.5	
Idaho	17	9	20	12	0.8	0.7	1.2	1.1	
Illinois	125	56	87	54	6.0	4.1	5.3	5.1	
Indiana	61	58	46	23	2.9	4.3	2.8	2.2	
Iowa	25	13	17	21	1.2	1.0	1.0	2.0	
Kansas	21	24	21	11	1.0	1.8	1.3	1.0	
Kentucky	25	39	28	25	1.2	2.9	1.7	2.4	
Louisiana	35	13	13	14	1.7	1.0	0.8	1.3	
Maine	14	13	11	5	0.7	1.0	0.7	0.5	
Maryland	63	35	52	33	3.0	2.6	3.2	3.1	
Massachusetts	68	29	55	27	3.3	2.1	3.4	2.6	
Michigan	67	58	49	42	3.2	4.3	3.0	4.0	
Minnesota	58	31	53	27	2.8	2.3	3.2	2.6	
Mississippi	13	16	16	15	0.6	1.2	1.0	1.4	
Missouri	44	39	42	32	2.1	2.9	2.6	3.1	
Montana	10	7	4	5	0.5	0.5	0.2	0.5	
Nebraska	17	23	10	19	0.8	1.7	0.6	1.8	
Nevada	24	13	25	9	1.2	1.0	1.5	0.9	
New Hampshire	33	16	15	3	1.6	1.2	0.9	0.3	
New Jersey	177	61	62	15	8.6	4.5	3.8	1.4	
New Mexico	13	11	19	8	0.6	0.8	1.2	0.8	
New York	217	89	200	76	10.5	6.6	12.2	7.2	
North Carolina	64	41	63	24	3.1	3.0	3.8	2.3	
North Dakota	8	2	10	3	0.4	0.1	0.6	0.3	
Northern Mariana Islands	0	0	0	0	0.0	0.0	0.0	0.0	
Ohio	66	48	50	53	3.2	3.5	3.0	5.1	

(continued)

Table A1. Descriptive Statistics for the 2019 Background Questionnaire (continued)

Question	Count				Percent				
	PT KSR	PTA KSR	PT WA	PTA WA	PT KSR	PTA KSR	PT WA	PTA WA	
Q8 (continued) In which of the following United States physical therapy jurisdictions are you currently licensed (percentages may sum to more than 100%)?									
Oklahoma	14	23	15	16	0.7	1.7	0.9	1.5	
Oregon	42	28	38	8	2.0	2.1	2.3	0.8	
Pennsylvania	107	65	95	62	5.2	4.8	5.8	5.9	
Puerto Rico	0	0	0	0	0.0	0.0	0.0	0.0	
Rhode Island	8	7	9	8	0.4	0.5	0.5	0.8	
South Carolina	41	41	32	17	2.0	3.0	2.0	1.6	
South Dakota	8	8	2	3	0.4	0.6	0.1	0.3	
Tennessee	39	44	30	35	1.9	3.2	1.8	3.3	
Texas	207	140	120	106	10.0	10.3	7.3	10.1	
U.S. Virgin Islands	2	0	0	0	0.1	0.0	0.0	0.0	
Utah	16	20	18	9	0.8	1.5	1.1	0.9	
Vermont	7	6	6	1	0.3	0.4	0.4	0.1	
Virginia	79	42	59	28	3.8	3.1	3.6	2.7	
Washington	47	39	43	15	2.3	2.9	2.6	1.4	
West Virginia	16	15	12	10	0.8	1.1	0.7	1.0	
Wisconsin	39	32	46	31	1.9	2.4	2.8	3.0	
Wyoming	6	9	8	2	0.3	0.7	0.5	0.2	
Q9 Which best describes the location of your PRIMARY clinical work setting?									
Urban/Metropolitan	769	410	675	343	37.2	30.2	41.2	32.7	
Suburban	958	572	673	431	46.3	42.1	41.0	41.1	
Rural	300	351	265	250	14.5	25.8	16.2	23.8	
Q10 What is your employment status as a physical therapist (physical therapist assistant)?									
Actively employed as a physical therapist (physical therapist assistant) full-time	1,499	990	1,479	810	72.5	72.9	90.2	77.2	
Actively employed as a physical therapist (physical therapist assistant) part-time	368	263	93	177	17.8	19.4	5.7	16.9	
Self-employed as a physical therapist (physical therapist assistant) full-time	127	34	23	19	6.1	2.5	1.4	1.8	
Self-employed as a physical therapist (physical therapist assistant) part-time	48	33	10	8	2.3	2.4	0.6	0.8	
Retired	0	0	0	0	0.0	0.0	0.0	0.0	
Unemployed, seeking employment as a physical therapist (physical therapist assistant)	26	38	35	35	1.3	2.8	2.1	3.3	
NOT seeking employment as a physical therapist (physical therapist assistant)	0	0	0	0	0.0	0.0	0.0	0.0	

(continued)

Table A1. Descriptive Statistics for the 2018 Background Questionnaire (continued)

Question	Count				Percent				
	PT KSR	PTA KSR	PT WA	PTA WA	PT KSR	PTA KSR	PT WA	PTA WA	
Q11 How many physical therapist (physical therapist assistant) positions/jobs have you held in the past 12 months?									
1	1,500	958	1,009	614	72.5	70.5	61.5	58.5	
2 to 3	502	355	565	382	24.3	26.1	34.5	36.4	
4 to 5	33	24	35	34	1.6	1.8	2.1	3.2	
6 to 7	0	3	3	3	0.0	0.2	0.2	0.3	
More than 7	1	2	2	1	0.0	0.1	0.1	0.1	
Q12 Summary: Count of respondents spending at least 50% of their time in a facility.									
Academic institution (post-secondary)	54	16	20	1	2.6	1.2	1.2	0.1	
School system (preschool/primary/secondary)	100	33	31	15	4.8	2.4	1.9	1.4	
Acute care hospital	223	104	191	61	10.8	7.7	11.6	5.8	
Health and wellness facility	13	7	10	7	0.6	0.5	0.6	0.7	
Outpatient facility (health system or hospital-based)	470	205	384	156	22.7	15.1	23.4	14.9	
Outpatient facility (private)	522	265	599	334	25.2	19.5	36.5	31.8	
Industrial Rehabilitation	10	8	5	4	0.5	0.6	0.3	0.4	
Inpatient Rehab Facility (IRF)	86	62	74	50	4.2	4.6	4.5	4.8	
US Military/Veterans Administration/Indian Health Services	20	16	7	4	1.0	1.2	0.4	0.4	
Patient's home/home care	272	249	93	77	13.2	18.3	5.7	7.3	
Research center	6	0	4	0	0.3	0.0	0.2	0.0	
Skilled Nursing Facility (SNF)	216	349	173	309	10.4	25.7	10.5	29.5	
Assisted Living Facility (ALF)	20	29	10	8	1.0	2.1	0.6	0.8	
Long-term Acute Care (LTAC)	7	11	8	13	0.3	0.8	0.5	1.2	
Other	43	13	19	7	2.1	1.0	1.2	0.7	
Q13 Approximately what percentage of your time over the past 12 months was spent in direct patient care?									
0%	28	12	7	5	0.7	1.3	0.1	0.0	
1 to 25%	86	20	18	4	5.1	3.0	0.4	0.7	
26 to 50%	53	42	27	14	3.5	2.9	1.3	0.7	
51 to 75%	277	167	181	113	14.7	10.9	9.2	6.5	
76 to 100%	1,587	1,090	1,385	896	0.7	1.3	0.1	0.0	

(continued)

Table A1. Descriptive Statistics for the 2018 Background Questionnaire (continued)

Question	Count				Percent			
	PT KSR	PTA KSR	PT WA	PTA WA	PT KSR	PTA KSR	PT WA	PTA WA
Q14 For the facility in which you work the most, what is your principal area of responsibility?								
None	512	628	533	581	24.8	46.2	32.5	55.4
Administration/Management	0	137	300	107	0.0	10.1	18.3	10.2
Supervision	951	284	577	89	46.0	20.9	35.2	8.5
Consultation	438	119	196	46	21.2	8.8	12.0	4.4
Research	108	36	68	30	5.2	2.7	4.1	2.9
Sales/Marketing	270	107	206	54	13.1	7.9	12.6	5.1
Academic education	156	78	107	57	7.5	5.7	6.5	5.4
Clinical education	720	368	567	240	34.8	27.1	34.6	22.9
Other	179	91	49	47	8.7	6.7	3.0	4.5
Q15 Summary: Count of respondents spending at least 50% of their time with a population group.								
18 and under	247	64	141	34	11.9	4.7	8.6	3.2
19 to 64	727	343	646	281	35.2	25.3	39.4	26.8
65 and over	1,009	891	704	669	48.8	65.6	42.9	63.8
Q16 Are you a current member of American Physical Therapy Association (APTA)?								
Yes	592	182	720	223	28.6	13.4	43.9	21.3
No	1,407	1,116	854	752	68.0	82.2	52.1	71.7
I don't know	27	38	42	62	1.3	2.8	2.6	5.9
Q17 Which of these statements is true regarding your experience supervising PTAs over the past 12 months?								
I routinely supervise PTAs and have a good understanding of the knowledge and skills they need to provide safe and effective care.	1,240	340	1,012	0	60.0	25.0	61.7	0.0
I routinely supervise PTAs but I do NOT have a good understanding of the knowledge and skills they need to provide safe and effective care.	40	0	64	0	1.9	0.0	3.9	0.0
I do NOT routinely supervise PTAs and/or I do NOT have a good understanding of the knowledge and skills they need to provide safe and effective care.	759	0	542	0	36.7	0.0	33.0	0.0

Note. Percentages are based on the observed values divided by the total number of usable cases. Missing data are not reported. Within a question, the results may not sum to 100%. For question 8, respondents were allowed to select multiple jurisdictions in which they are currently licensed. The respondents who indicated being licensed in Guam and Northern Mariana Islands are also licensed in at least one U.S. state. For questions 12 and 15, percentages may not sum to 100% because these items used a rate all that apply format. Question 17 was not administered to PTA respondents. The 340 respondents shown for Q17 within the PTA KSR sample are PT KSR survey respondents who were reassigned based on their response to Q17.

Appendix B. Summary of Work Activity and Knowledge and Skill Requirements Survey Responses

Tables B.1-B.4: Statistics and Formatting Key:

- **Sample Size (n):** Count of respondents that provided usable data
- **Mean Importance (M):** Based on responses for scale points 1 through 5
- **Standard Deviation of Importance (SD):** Based on responses for scale points 1 through 5
- **Percent Important (%_{imp}):** Sum of responses for scale points 2 through 5, divided by the total number of usable respondents

- **Boldface Statement (Black):** Statement text was altered in 2019 in a non-trivial manner prior to survey administration
- **Boldface Mean (Red):** Mean importance value was less than 2.50 (Criticality Threshold)
- **Light Red Shading:** 2019 mean importance value was below 2.50 (Criticality Threshold)
- **Light Orange Shading:** 2019 mean importance value was between 2.50 (including) and 3.00 (excluding)

Table B.1. PT Work Activity Survey Results

PT WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
PATIENT/CLIENT ASSESSMENT												
Information Gathering & Synthesis												
<i>Interview patients/clients, caregivers, and family to obtain patient/client history and current information (e.g., medical, surgical, medications, social, cultural, language preference, economic) to</i>												
- establish prior and current level of function/activity	460	489	819	4.66	4.74	4.79	0.51	0.55	0.48	100.0	100.0	100.0
- establish general health status	460	489	819	4.52	4.46	4.52	0.64	0.72	0.66	99.3	99.8	99.9
- identify red flags (e.g., fever, malaise, unexplained weight change) and contraindications	459	489	819	4.68	4.74	4.72	0.56	0.59	0.63	99.3	99.6	100.0
- identify risk factors and needs for preventative measures	460	489	819	4.34	4.37	4.41	0.76	0.78	0.83	97.8	99.8	99.5
- identify patient/client's, family/caregiver's goals, values, and preferences	458	489	819	4.46	4.45	4.54	0.62	0.73	0.69	99.3	99.8	99.8
- determine if patient/client is appropriate for PT	456	489	819	4.52	4.52	4.60	0.64	0.72	0.72	99.6	99.8	99.4
- determine insurance and financial resources and issues (e.g., co-pays, deductibles, insurance limitations)	445	489	819	3.50	3.29	3.39	1.05	1.17	1.16	82.5	89.8	86.0
- determine impact of medications on plan of care (e.g., medication reconciliation, timing of intervention delivery, adherence)	455	489	819	3.97	3.81	3.79	0.86	1.00	1.02	96.5	97.5	97.4
Administer standardized questionnaires (e.g., pain inventory, fall risk assessment)	454	489	818	4.03	3.73	3.70	0.88	1.04	1.12	94.9	96.9	94.6
Review medical records (e.g., lab values, diagnostic tests, imaging, specialty reports, narrative, consults)	459	489	818	4.22	4.16	4.10	0.75	0.92	0.99	97.6	99.8	98.9
Gather information/discuss patient/client's current health status with interprofessional/interdisciplinary team members	395	489	818	4.11	3.98	4.01	0.72	0.96	0.98	99.0	99.4	98.3
Identify signs/symptoms of change in patient/client's health status that require intervention by interprofessional/interdisciplinary team members	395	489	818	4.33	4.40	4.42	0.69	0.79	0.79	99.0	99.2	99.5

PT WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Systems Review												
<i>Perform screen of the</i>												
- patient/client's current affect, cognition, communication, and learning preferences (e.g., ability to convey needs, consciousness, orientation, expected emotional/behavioral responses)	393	489	818	4.04	4.00	3.99	0.80	0.97	1.03	97.2	96.3	95.7
- patient/client's quality of speech, hearing, and vision (e.g., dysarthria, pitch/tone, use of corrective lenses, use of hearing aids)	376	489	818	3.43	3.25	3.27	0.99	1.18	1.15	82.7	89.0	86.1
- vestibular system (e.g., dizziness, vertigo)	383	481	794	3.57	3.50	3.50	0.89	1.04	1.09	90.6	92.8	90.1
- gastrointestinal system (e.g., difficulty swallowing, nausea, change in appetite/diet, change in bowel function)	372	481	794	3.19	2.90	2.98	1.01	1.05	1.10	75.0	84.9	80.7
- genitourinary system (e.g., changes in bladder function, catheter complications)	362	481	794	3.20	2.98	3.11	1.05	1.11	1.13	73.5	82.6	80.5
- reproductive system (e.g., sexual and/or menstrual dysfunction, menopause status)	350	481	794	2.75	2.45	2.49	1.08	1.07	1.16	54.6	67.1	64.6
- cardiovascular/pulmonary system (e.g., blood pressure, heart rate, respiration rate)	393	481	794	4.22	4.19	4.10	0.77	0.95	0.93	98.2	96.9	94.7
- lymphatic system (e.g., primary and/or secondary edema)	371	481	794	3.33	3.12	3.18	1.03	1.06	1.11	80.6	88.3	84.5
- integumentary system (e.g., presence of scar formation, skin integrity, discoloration)	388	481	794	3.92	3.59	3.65	0.79	0.97	1.01	96.6	95.9	94.1
- musculoskeletal system (e.g., gross symmetry, strength, range of motion)	387	481	794	4.70	4.77	4.78	0.48	0.56	0.50	100.0	98.0	96.9
- neuromuscular system (e.g., gross coordination, motor function, balance, locomotion, gross sensory function)	388	481	794	4.67	4.73	4.76	0.49	0.56	0.52	100.0	98.2	96.9
Tests & Measures												
Cardiovascular/Pulmonary												
<i>Select and perform tests and measures of</i>												
- cardiovascular function (e.g., blood pressure, heart rate, heart sounds)	364	474	769	4.25	4.24	4.18	0.72	0.93	0.97	98.4	95.9	91.7
- pulmonary function (e.g., respiratory rate, breathing patterns, breath sounds, chest excursion)	349	474	769	3.85	3.71	3.72	0.96	1.18	1.15	90.8	92.0	86.8

PT WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
- perfusion and gas exchange (e.g., oxygen saturation)	342	474	769	3.83	3.65	3.67	1.01	1.21	1.19	88.3	85.5	81.7
- peripheral circulation (e.g., capillary refill, blood pressure in upper versus lower extremities)	342	474	769	3.54	3.24	3.30	1.01	1.16	1.13	84.8	85.1	82.7
- critical limb ischemia (e.g., peripheral pulses, skin perfusion pressure)	331	474	769	3.49	3.21	3.23	1.03	1.17	1.19	83.4	82.2	78.6
- physiological responses to position change (e.g., orthostatic hypotension, skin color, blood pressure, heart rate)	360	474	769	4.00	4.04	4.07	0.85	1.01	1.02	95.6	94.7	90.1
- aerobic capacity under maximal and submaximal conditions (e.g., endurance, exercise tolerance, metabolic equivalents, perceived exertion)	340	474	769	3.56	3.66	3.63	1.00	1.13	1.14	85.9	89.2	86.2
Anthropometric												
<i>Select and perform tests and measures of</i>												
- body composition (e.g., percent body fat, lean muscle mass)	312	474	768	2.71	2.51	2.53	1.13	1.08	1.13	52.9	70.3	67.2
- body dimensions (e.g., height, weight, girth, limb length, head circumference/shape)	341	474	768	2.99	2.60	2.70	1.08	1.08	1.16	66.3	76.9	75.0
- Quantify and qualify edema (e.g., pitting, volume, circumference)	354	474	768	3.45	3.23	3.24	0.90	1.01	1.06	88.4	91.4	86.1
Arousal, Attention, & Cognition												
<i>Select and perform tests and measures of</i>												
- arousal and orientation (e.g., level of consciousness, time, person, place, situation)	328	465	746	3.86	3.76	3.78	0.91	1.19	1.23	92.4	86.3	78.5
- attention and cognition (e.g., ability to process commands, delirium, confusion)	325	465	746	3.76	3.80	3.83	0.94	1.12	1.13	90.8	87.3	81.4
- communication (e.g., expressive and receptive skills, following instructions)	321	465	746	3.70	3.78	3.81	0.96	1.04	1.07	88.5	89.4	84.0
- recall (including memory and retention)	318	465	746	3.47	3.45	3.44	1.04	1.10	1.11	83.0	86.5	80.5
Nerve Integrity												
<i>Select and perform tests and measures of</i>												
- cranial nerve integrity (e.g., facial asymmetry, oculomotor function, hearing)	332	465	746	3.82	3.38	3.42	0.96	1.18	1.12	90.7	85.5	81.6
- spinal nerve integrity (e.g., dermatome, myotome)	353	465	746	4.17	4.10	4.00	0.84	0.93	1.00	96.9	94.1	89.6

PT WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
- peripheral nerve integrity (e.g., sensation, strength)	351	465	746	4.28	4.23	4.24	0.70	0.83	0.85	99.4	94.7	90.2
- neural provocation (e.g., tapping, tension, stretch)	337	465	746	3.81	3.59	3.57	1.00	1.11	1.15	90.2	87.7	84.2
Environmental & Community Integration/Reintegration (Home, Work, Job, School, Play, & Leisure)												
Assess activities of daily living (ADL) (e.g., bed mobility, transfers, household mobility, dressing, self-care, toileting, sexual relations)	355	457	721	4.41	4.47	4.51	0.69	0.82	0.81	99.2	92.6	86.9
Assess instrumental activities of daily living (IADL) (e.g., household chores, hobbies)	348	457	721	4.11	4.00	4.15	0.86	1.03	0.95	96.8	90.6	85.8
Assess ability to perform skills needed for integration or reintegration into the community, work, or school	313	457	721	4.04	4.13	4.22	0.81	0.94	0.92	96.8	91.2	85.0
Assess barriers (e.g., social, economic, physical, psychological, environmental, work conditions and activities) to home, community, work, or school integration/reintegration	322	457	721	3.99	4.18	4.13	0.82	0.89	0.92	97.5	91.2	86.6
Assess safety in home, community, work, or school environments	300	457	721	4.07	4.25	4.21	0.82	0.93	0.94	97.0	88.8	81.4
Assess ability to participate in activities with or without the use of devices, equipment, or technologies	319	457	721	4.08	4.30	4.30	0.78	0.84	0.86	97.2	91.4	86.4
Ergonomics and Body Mechanics												
<i>Select and perform tests and measures of</i>												
- ergonomics and body mechanics during functional activities	317	446	710	4.00	4.12	4.16	0.87	0.99	1.00	95.9	88.5	84.9
- postural alignment and position (static and dynamic)	326	446	710	4.16	4.21	4.23	0.75	0.89	0.94	98.8	90.6	86.2
- specific work conditions or activities	301	446	710	3.75	3.83	3.90	0.91	1.04	1.08	92.0	87.3	80.2
- tools, devices, equipment, and workstations related to work actions, tasks, or activities	282	446	710	3.58	3.52	3.61	0.95	1.13	1.17	88.3	82.0	76.2
Functional Mobility, Balance, & Vestibular												
<i>Select and perform tests and measures of</i>												
- balance (dynamic and static) with or without the use of specialized equipment	326	446	710	4.27	4.60	4.54	0.67	0.69	0.73	100.0	90.8	86.4
- gait and locomotion (e.g., ambulation, wheelchair mobility) with or without the use of specialized equipment	327	446	710	4.42	4.72	4.67	0.64	0.58	0.61	99.7	90.6	86.3

PT WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
- mobility during functional activities and transitional movements (e.g., transfers, bed mobility)	307	446	710	4.35	4.69	4.63	0.69	0.63	0.71	99.7	91.0	86.0
- vestibular function (e.g., peripheral dysfunction, central dysfunction, BPPV)	284	446	710	3.68	3.64	3.62	0.87	1.03	1.08	93.0	84.5	79.5
Integumentary Integrity												
Assess skin characteristics (e.g., continuity of skin color, sensation, temperature, texture, turgor)	309	442	702	3.77	3.49	3.54	0.85	1.04	1.04	93.9	87.1	81.1
Assess wound characteristics (e.g., tissue involvement, depth, tunneling, burn classification, ulcer/injury classification)	261	442	702	3.48	3.17	3.17	1.05	1.17	1.18	81.2	74.4	63.9
Assess scar tissue characteristics (e.g., banding, pliability, sensation, and texture)	288	442	702	3.52	3.26	3.28	0.96	1.06	1.13	86.8	81.4	74.5
Assess activities, positioning, and postures that may produce or relieve trauma to the skin	288	442	702	3.93	3.83	3.78	0.81	1.08	1.10	95.5	82.8	76.6
Assess devices and equipment that may produce or relieve trauma to the skin	277	442	702	3.74	3.71	3.69	0.94	1.10	1.15	90.3	81.6	72.3
Joint Integrity & Range of Motion												
<i>Select and perform tests and measures of</i>												
- spinal and peripheral joint stability (e.g., ligamentous integrity, joint structure)	301	440	690	4.10	4.03	4.13	0.87	1.09	1.04	95.3	86.7	81.1
- spinal and peripheral joint mobility (e.g., glide, end feel)	300	440	690	4.10	3.90	3.99	0.92	1.19	1.17	95.0	84.5	79.0
- range of motion (e.g., passive, active, functional)	313	440	690	4.45	4.54	4.62	0.67	0.75	0.68	99.0	89.6	84.2
- flexibility (e.g., muscle length, soft tissue extensibility)	294	440	690	4.24	4.35	4.40	0.77	0.89	0.91	98.0	89.4	83.2
Motor Function												
<i>Select and perform tests and measures of</i>												
- muscle tone (e.g., hypertonicity, hypotonicity, dystonia)	295	440	690	3.99	4.29	4.28	0.81	0.87	0.94	96.9	89.4	83.9
- dexterity, coordination, and agility (e.g., rapid alternating movement, finger to nose)	291	440	690	3.86	3.93	3.99	0.81	1.00	1.04	96.9	88.5	82.8
- ability to initiate, modify and control movement patterns and postures (e.g., catching a ball, gait)	292	440	690	4.11	4.30	4.33	0.78	0.86	0.87	97.9	89.4	83.8
- ability to change movement performance with practice (e.g., motor learning)	290	440	690	4.03	4.30	4.37	0.77	0.83	0.81	97.6	89.6	83.6

PT WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
- movement quality (e.g., purpose, precision, efficiency, biomechanics, kinematics)	288	440	690	4.00	4.39	4.41	0.81	0.77	0.76	96.9	89.6	83.8
Muscle Performance												
<i>Select and perform tests and measures of</i>												
- muscle strength, power, and endurance without specialized equipment (e.g., manual muscle test, functional strength testing)	297	438	685	4.37	4.63	4.64	0.66	0.69	0.68	99.7	89.2	83.4
- muscle strength, power, and endurance with specialized equipment (e.g., isokinetic testing, dynamometry)	258	438	685	3.43	3.39	3.58	1.06	1.40	1.40	79.8	69.3	65.3
- electrophysiological function using surface electrodes (e.g., surface EMG)	201	438	685	2.67	2.58	2.61	1.22	1.24	1.33	51.2	45.2	39.4
- electrophysiological function using needle insertion (e.g., nerve conduction)	190	438	685	2.41	2.31	2.34	1.25	1.20	1.28	38.9	36.6	30.8
- muscle integrity (e.g., ultrasound imaging)	186	438	685	2.51	2.53	2.60	1.14	1.25	1.37	44.6	42.7	34.7
Neuromotor Development & Sensory Integration												
<i>Select and perform tests and measures of</i>												
- acquisition and evolution of motor skills throughout the lifespan	209	438	685	3.06	3.15	3.30	1.09	1.24	1.28	69.4	67.7	58.1
- sensorimotor integration	224	438	685	3.23	3.29	3.43	1.03	1.16	1.18	75.9	75.1	66.7
- developmental reflexes and reactions (e.g., asymmetrical tonic neck reflex, righting reactions)	204	438	685	3.17	3.15	3.24	1.04	1.29	1.35	74.0	61.6	52.7
- oral motor function, phonation, and speech production	188	438	685	2.69	2.65	2.59	1.12	1.20	1.20	55.3	53.4	41.1
Reflex Integrity												
<i>Select and perform tests and measures of</i>												
- deep tendon/muscle stretch reflexes (e.g., quadriceps, biceps)	274	432	680	3.62	3.66	3.68	0.93	1.15	1.17	89.8	83.4	78.6
- upper motor neuron integrity (e.g., Babinski reflex, Hoffman sign)	263	432	680	3.69	3.64	3.61	0.95	1.17	1.20	89.0	81.6	77.3
- superficial reflexes and reactions (e.g., cremasteric reflex, abdominal reflexes)	206	432	680	3.03	2.92	2.91	1.14	1.24	1.39	65.0	63.2	58.6
Pain & Sensory Integrity												
<i>Select and perform tests and measures of</i>												
- pain (e.g., location, intensity, frequency, central, peripheral, psychogenic)	290	432	680	4.10	4.40	4.46	0.81	0.81	0.82	96.6	87.3	82.3

PT WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
- deep sensation (e.g., proprioception, kinesthesia, pressure)	281	432	680	3.78	3.79	3.84	0.83	1.10	1.08	94.7	85.1	80.3
- superficial sensation (e.g., touch, temperature discrimination)	278	432	680	3.78	3.94	3.92	0.87	1.01	1.03	93.5	86.1	80.6
- visceral organ sensitivity and integrity (e.g., palpation, auscultation)	222	432	680	3.13	2.88	2.86	1.14	1.16	1.28	68.9	63.2	57.9
Evaluation & Diagnosis												
<i>Interpret each of the following types of data to determine the need for intervention or the response to intervention:</i>												
- Cardiovascular/pulmonary system	247	431	676	3.87	4.34	4.19	0.97	0.91	0.96	90.3	86.9	80.2
- Lymphatic system	206	431	676	3.13	3.13	3.00	1.10	1.09	1.13	69.4	75.1	67.2
- Arousal, attention, cognition, and communication	237	431	676	3.71	3.80	3.80	0.93	1.08	1.11	90.3	82.4	75.3
- Neuromuscular system	271	431	676	3.98	4.66	4.62	0.86	0.64	0.64	95.2	87.5	82.4
- Functional mobility, balance, and vestibular	276	431	676	4.14	4.67	4.63	0.79	0.64	0.64	97.8	87.5	82.3
- Musculoskeletal system	279	431	676	4.33	4.82	4.80	0.72	0.50	0.49	98.9	87.7	82.5
- Integumentary system	261	431	676	3.59	3.52	3.53	0.91	1.05	1.07	89.3	84.3	78.3
- Anthropometric	226	431	676	3.11	2.84	2.83	1.09	1.11	1.12	70.8	70.3	65.4
- Gastrointestinal system	212	431	676	2.90	2.71	2.69	1.12	0.99	1.11	60.8	70.1	61.9
- Genitourinary system	209	431	676	2.91	2.68	2.71	1.14	1.02	1.12	62.2	68.9	60.8
- Need for or use of assistive and adaptive devices/technologies	273	430	671	4.05	4.52	4.38	0.83	0.78	0.93	96.0	86.9	79.9
- Need for or use of orthotic, protective, and supportive devices/technologies	267	430	671	3.81	4.27	4.08	0.86	0.89	1.02	92.9	86.5	79.1
- Need for or use of prosthetic devices/technologies	233	430	671	3.52	3.98	3.77	0.99	1.05	1.19	84.5	76.5	70.1
- Barriers to home, community, work, or school integration/reintegration	266	430	671	3.81	4.21	4.12	0.89	0.92	0.98	93.6	85.1	79.4
- Ergonomics and body mechanics	259	430	671	3.78	4.12	4.13	0.89	0.94	0.97	93.8	86.9	80.6
- Pain and sensory integrity	270	430	671	3.93	4.22	4.26	0.88	0.86	0.84	95.2	87.7	81.6
- ADLs/IADLs and home management	267	430	671	3.99	4.40	4.39	0.80	0.81	0.88	97.0	87.1	80.7
- Imaging, lab values, and medications	262	430	671	3.84	3.61	3.62	0.88	1.05	1.05	93.5	84.0	76.3
Evaluate the patient/client's ability to assume or resume home, community, work, school, and/or leisure activities	273	430	668	4.12	4.63	4.57	0.76	0.61	0.72	98.2	87.1	81.0
Develop physical therapy diagnosis by integrating system and non-system data	266	430	668	4.18	4.48	4.36	0.81	0.79	0.88	97.4	86.9	80.5

PT WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Development of Prognosis, Plan of Care, & Goals												
Establish PT prognosis based on information gathered during the examination process	279	429	666	4.50	4.59	4.62	0.63	0.68	0.67	99.3	87.5	80.8
Develop plan of care based on data gathered during the examination process, incorporating information from the patient/client, caregiver, family members, and other professionals	276	429	666	4.63	4.78	4.79	0.53	0.50	0.49	100.0	87.5	81.2
Revise treatment intervention plan based on treatment outcomes, change in patient/client's health status, and ongoing evaluation	278	429	666	4.60	4.79	4.77	0.54	0.48	0.53	100.0	87.5	81.3
Develop objective and measurable goals based on information gathered during the examination process, in collaboration with the patient/client, caregiver, family members, and/or other professionals	278	429	666	4.58	4.68	4.69	0.59	0.57	0.63	99.6	87.7	81.3
Select interventions based on information gathered during the examination process, incorporating information from the patient/client, caregiver, family members, and other professionals	278	429	666	4.60	4.79	4.79	0.57	0.46	0.51	99.6	87.7	81.3
Modify plan of care based on patient/client's resources (e.g., financial, transportation, time, insurance benefits, available technologies)	277	429	666	4.32	4.56	4.48	0.79	0.74	0.82	97.8	86.9	80.2
INTERVENTIONS												
Procedural Interventions												
Therapeutic Exercise/Therapeutic Activities												
<i>Perform and/or train patient/client/caregiver in</i>												
- aerobic capacity/endurance conditioning	458	500	821	3.96	3.91	3.96	0.85	0.96	1.01	94.8	98.8	97.0
- balance, coordination, and agility activities	463	500	821	4.52	4.57	4.56	0.60	0.67	0.69	100.0	99.6	99.6
- body mechanics and postural stabilization techniques	460	500	821	4.46	4.45	4.47	0.64	0.81	0.78	99.6	99.6	99.6
- flexibility techniques	457	500	821	4.12	3.76	3.73	0.77	1.01	1.07	97.4	98.4	97.8
- neuromotor techniques (e.g., movement pattern training, neuromuscular education or re-education)	458	500	821	4.25	4.21	4.27	0.75	0.92	0.89	98.0	98.2	98.9
- relaxation techniques	457	500	821	3.54	3.44	3.42	0.91	1.09	1.13	89.1	96.2	94.6
- strength, power, and endurance exercises	460	500	821	4.41	4.33	4.38	0.70	0.83	0.80	98.9	99.6	99.4

PT WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
- genitourinary management (e.g., pelvic floor exercises, bladder strategies)	420	500	820	3.05	2.72	2.73	1.06	1.22	1.26	67.9	59.8	56.0
- gastrointestinal management (e.g., bowel strategies, positioning to avoid reflux)	415	500	820	2.87	2.57	2.62	1.05	1.16	1.22	61.4	57.2	54.9
- manual/mechanical airway clearance techniques (e.g., assistive devices, assistive cough, incentive spirometer, flutter valve, postural drainage, percussion, vibration)	419	500	820	3.19	2.77	2.85	1.06	1.24	1.26	73.0	57.6	55.7
- techniques to maximize ventilation and perfusion (e.g., positioning, active cycle breathing, autogenic drainage, paced breathing, pursed lip breathing)	381	500	820	3.45	3.13	3.10	1.04	1.21	1.25	81.1	70.2	66.1
- mechanical repositioning for vestibular dysfunction	391	500	820	3.33	3.21	3.21	0.94	1.16	1.19	82.1	79.4	73.3
- habituation/adaptation exercises for vestibular dysfunction	384	500	820	3.30	3.20	3.24	0.94	1.13	1.19	81.0	81.2	76.0
Functional Training												
Recommend barrier accommodations or modifications (e.g., ramps, grab bars, raised toilet, environmental control units)	414	500	820	3.92	3.93	3.80	0.86	1.17	1.23	94.9	89.2	87.2
<i>Perform and/or train patient/client in</i>												
- the use of environmental modifications (e.g., ramps, grab bars, raised toilet, environmental control units)	408	491	795	3.91	3.88	3.82	0.89	1.17	1.25	94.4	88.6	84.2
- activities of daily living (ADL) (e.g., bed mobility, transfers, household mobility, dressing, self-care, toileting, sexual relations)	419	491	795	4.29	4.27	4.19	0.77	0.94	1.02	98.1	96.0	92.7
- community and leisure integration or reintegration (e.g., work/school/play)	406	491	795	3.75	3.81	3.80	0.92	1.04	1.08	91.9	92.0	90.6
- instrumental activities of daily living (IADL) (e.g., household chores, hobbies)	403	491	795	3.79	3.88	3.85	0.95	1.00	1.04	92.3	94.4	92.0
- mobility techniques	418	491	795	4.30	4.36	4.31	0.73	0.79	0.86	99.8	97.0	95.6
- gross motor developmental progression			795			3.46			1.30			77.1
- fall prevention and fall recovery strategies	420	491	795	4.43	4.55	4.43	0.68	0.73	0.88	99.3	96.6	94.9
- behavior modification and strategies that enhance functioning (e.g., energy conservation, pacing, pre-activity planning, reminder schedules)	383	491	795	3.74	3.95	3.86	0.88	0.99	1.04	92.2	95.2	93.1

PT WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Manual Therapy Techniques												
Perform manual lymphatic drainage	315	491	779	2.78	2.66	2.61	1.14	1.20	1.22	55.2	42.8	38.4
Perform dry needling	295	491	779	2.27	2.90	2.89	1.18	1.37	1.44	37.6	35.4	31.9
Perform spinal and peripheral manual traction	356	491	779	3.51	3.15	3.16	0.96	1.19	1.28	86.5	75.6	66.3
Perform and/or train patient/client/caregiver in soft tissue mobilization (e.g., connective tissue massage, therapeutic massage, foam rolling)	384	491	779	3.74	3.46	3.38	0.95	1.20	1.20	89.3	86.2	82.2
Perform instrument-assisted soft tissue mobilization	337	491	779	3.06	3.29	3.12	1.13	1.27	1.28	68.0	68.6	64.1
Perform peripheral joint range of motion	392	491	779	4.23	4.12	3.98	0.82	1.03	1.05	96.7	94.6	91.4
Perform peripheral mobilization/manipulation (thrust)	347	485	774	3.45	3.13	3.06	1.15	1.36	1.37	79.3	60.2	60.9
Perform peripheral mobilization (non-thrust)	369	485	774	3.96	3.81	3.68	1.00	1.21	1.29	91.3	80.0	76.5
Perform spinal mobilization/manipulation (thrust)	347	485	773	3.52	3.25	3.13	1.12	1.34	1.38	81.8	63.6	59.6
Perform spinal mobilization (non-thrust)	333	485	774	3.72	3.77	3.64	1.05	1.20	1.31	87.1	78.4	73.3
Perform cervical spinal manipulation (thrust)	288	485	774	2.98	2.89	2.77	1.20	1.37	1.40	64.2	48.2	50.1
Perform thoracic and lumbar spinal manipulation (thrust)	312	485	774	3.40	3.37	3.23	1.15	1.35	1.38	78.2	64.8	62.7
<i>Apply taping for</i>												
- neuromuscular reeducation	340	480	760	3.15	3.04	2.96	0.99	1.17	1.17	74.7	74.8	73.2
- lymphatic drainage	279	480	761	2.61	2.59	2.50	1.06	1.15	1.19	51.3	40.4	39.3
- pain management	325	480	760	2.96	3.01	2.83	1.00	1.23	1.20	68.9	70.2	66.4
Equipment & Devices												
<i>Fabricate, apply, and/or adjust</i>												
- adaptive devices (e.g., utensils, seating and positioning devices, steering wheel devices)	309	480	760	3.25	3.17	3.06	1.11	1.27	1.26	74.8	55.8	50.5
- protective devices (e.g., braces, cushions, helmets, protective taping)	327	480	760	3.35	3.38	3.21	1.00	1.20	1.17	80.1	68.8	64.6
- supportive devices (e.g., compression garments, corsets, elastic wraps, neck collars, serial casts, short-stretch bandages)	333	480	760	3.30	3.36	3.20	1.01	1.22	1.15	78.4	71.2	65.4
- orthotic devices (e.g., braces, shoe inserts, splints)	353	480	760	3.48	3.54	3.37	0.92	1.14	1.16	86.7	81.8	76.6
<i>Apply and/or adjust</i>												
- assistive devices/technologies (e.g., canes, crutches, walkers, wheelchairs, tilt tables, standing frames)	353	476	750	4.23	4.52	4.45	0.76	0.80	0.88	98.6	94.0	88.6

PT WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
- prosthetic devices/technologies (e.g., lower-extremity and upper-extremity prostheses, microprocessor-controlled prosthetic devices)	278	476	750	3.26	3.57	3.29	1.07	1.15	1.26	75.2	64.0	63.2
- mechanical neuromuscular re-education devices/technologies (e.g., weighted vests, therapeutic suits, body weight supported treadmill)	266	476	750	2.97	3.26	3.17	1.03	1.31	1.34	67.3	53.8	53.8
- prescribed oxygen during interventions	300	476	750	3.76	3.77	3.59	1.07	1.25	1.32	87.7	62.2	58.6
<i>Train patient/client/caregiver in the use of</i>												
- adaptive devices (e.g., utensils, seating and positioning devices, steering wheel devices)	285	465	733	3.27	3.39	3.24	1.00	1.31	1.29	80.7	55.6	51.0
- assistive devices/technologies (e.g., canes, crutches, walkers, wheelchairs, tilt tables, standing frames)	352	465	733	4.22	4.49	4.34	0.82	0.83	0.97	98.0	88.0	84.5
- orthotic devices (e.g., braces, shoe inserts, splints)	341	465	733	3.67	3.88	3.85	0.89	1.11	1.13	92.4	85.6	80.1
- prosthetic devices/technologies (e.g., lower-extremity and upper-extremity prostheses, microprocessor-controlled prosthetic devices)	271	465	733	3.21	3.56	3.35	1.08	1.22	1.24	74.2	58.2	56.6
- protective devices (e.g., braces, cushions, helmets, protective taping)	309	465	733	3.30	3.66	3.51	0.96	1.16	1.16	82.2	69.6	66.7
- supportive devices (e.g., compression garments, corsets, elastic wraps, neck collars, serial casts, short-stretch bandages)	313	465	733	3.27	3.55	3.44	0.96	1.20	1.19	78.9	72.4	69.2
- mechanical neuromuscular re-education devices/technologies (e.g., weighted vests, therapeutic suits, body weight supported treadmill)	218	465	733	2.83	3.23	3.21	1.02	1.33	1.30	59.2	49.6	51.8
<i>Integumentary Repair & Protection Techniques</i>												
<i>Perform and/or train patient/client/caregiver in</i>												
- nonselective debridement (e.g., removal of nonselective areas of devitalized tissue)	204	460	725	2.74	2.61	2.48	1.10	1.29	1.29	53.4	25.0	20.2
- selective enzymatic or autolytic debridement (e.g., removal of specific areas of devitalized tissue)	199	460	725	2.71	2.62	2.49	1.11	1.25	1.36	51.8	23.6	18.3

PT WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
- sharp debridement (e.g., removal of specific areas of devitalized tissue)	195	460	725	2.67	2.54	2.44	1.12	1.28	1.30	49.7	22.0	18.6
- application of topical agents (e.g., cleansers, creams, moisturizers, ointments, sealants) and dressings (e.g., hydrogels, wound coverings)	224	460	725	2.85	2.83	2.65	1.09	1.17	1.27	58.5	37.4	28.6
- desensitization techniques (e.g., brushing, tapping, use of textures)	289	460	725	3.10	3.02	2.96	0.96	1.08	1.16	72.7	65.2	57.0
- hyperbaric therapy	189	460	725	2.30	2.17	2.16	1.11	1.03	1.25	36.5	16.8	12.7
- negative pressure wound therapy	195	460	725	2.54	2.46	2.35	1.12	1.20	1.29	46.2	22.2	16.1
Recommend topical agents (e.g., pharmacological to physician, over-the-counter to patient) and dressings (e.g., hydrogels, negative pressure wound therapy, wound coverings)	221	460	725	2.76	2.69	2.61	1.11	1.14	1.29	54.3	36.2	26.6
Therapeutic Modalities												
<i>Perform and/or train patient/client/caregiver in</i>												
- biofeedback therapy (e.g., relaxation techniques, muscle reeducation, EMG)	265	458	712	3.35	3.26	3.03	1.03	1.16	1.25	77.7	74.4	62.1
- iontophoresis	237	458	712	2.82	2.53	2.36	1.04	1.21	1.22	62.0	45.0	37.4
- phonophoresis	209	456	706	2.56	2.29	2.10	1.18	1.25	1.30	49.3	25.8	19.7
- electrotherapy modalities, excluding iontophoresis (e.g., NMES, TENS, FES, interferential therapy, high-voltage pulsed current)*	289	458	712	3.49	3.31	3.16	1.01	1.22	1.28	83.7	77.6	67.7
- cryotherapy (e.g., cold pack, ice massage, vapocoolant spray)	306	458	712	3.62	3.46	3.36	0.98	1.17	1.23	86.6	84.8	75.8
- hydrotherapy using contrast baths/pools	201	458	712	2.69	2.73	2.38	1.22	1.32	1.32	49.8	34.2	28.5
- hydrotherapy (e.g., aquatic exercise, underwater treadmill)	215	458	712	3.01	3.03	2.91	1.08	1.26	1.31	68.8	43.6	35.7
- phototherapy (laser light)	185	458	712	2.26	2.23	2.08	1.17	1.20	1.28	36.2	24.6	18.5
- monochromatic infrared agent procedures (e.g., light emitting diodes [LEDs])	182	456	706	2.13	2.00	1.86	1.12	1.03	1.16	34.1	18.6	12.7
- ultrasound procedures	262	456	706	3.08	2.59	2.49	1.17	1.28	1.36	69.5	53.4	40.8
- diathermy	188	456	706	2.24	2.14	2.03	1.19	1.23	1.32	36.7	20.6	16.1
- dry heat thermotherapy (e.g., Fluidotherapy)	189	456	706	2.31	2.18	2.03	1.15	1.20	1.18	39.2	22.0	20.0
- hot pack thermotherapy	292	456	706	3.39	3.12	3.15	1.00	1.21	1.26	82.5	75.2	67.0
- paraffin bath thermotherapy	201	456	706	2.60	2.63	2.37	1.21	1.26	1.25	49.8	36.6	28.7
- shockwave therapy	173	456	706	2.01	2.12	1.86	1.14	1.17	1.24	29.5	16.4	11.8

PT WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Mechanical Modalities												
<i>Apply and/or train patient/client/caregiver in</i>												
- intermittent pneumatic compression	206	455	704	2.63	2.89	2.77	1.18	1.21	1.33	51.0	40.2	33.5
- assisted movement devices (e.g., dynamic splint, continuous passive motion devices)	251	455	704	2.90	2.90	2.69	1.05	1.20	1.28	62.9	53.2	45.1
- mechanical spinal traction	243	455	704	3.17	2.98	2.74	1.09	1.24	1.30	74.9	53.4	44.6
Non-procedural Interventions												
Communication												
<i>Discuss physical therapy evaluation findings, interventions, goals, prognosis, discharge planning, and plan of care with</i>												
- physical therapists, physical therapist assistants, and/or support staff	311	454	702	4.67	4.79	4.71	0.60	0.54	0.66	99.0	90.6	84.5
- interprofessional/interdisciplinary team members	310	454	702	4.60	4.63	4.58	0.62	0.70	0.78	99.4	90.0	83.7
- patient/client/caregiver	313	454	702	4.73	4.85	4.81	0.51	0.42	0.51	99.7	90.8	85.4
Provide written, oral, and electronic information to the patient/client and/or caregiver	312	454	702	4.62	4.73	4.67	0.61	0.55	0.66	98.7	90.8	85.1
Documentation												
<i>Document</i>												
- examination results	312	449	700	4.71	4.81	4.81	0.55	0.48	0.47	99.4	89.8	85.3
- evaluation to include diagnosis, goals, and prognosis	310	449	700	4.70	4.83	4.81	0.55	0.47	0.48	99.7	89.8	85.3
- intervention(s) and patient/client response(s) to intervention	312	449	700	4.72	4.84	4.82	0.53	0.43	0.49	99.7	89.8	85.1
- patient/client/caregiver education	310	449	700	4.65	4.76	4.79	0.58	0.55	0.49	99.4	89.8	85.3
- outcomes (e.g., discharge summary, reassessments)	311	449	700	4.66	4.67	4.72	0.58	0.65	0.58	99.4	89.6	85.1
- communication with the interdisciplinary/interprofessional team related to the patient/client's care	310	449	700	4.54	4.62	4.60	0.69	0.69	0.69	98.4	89.2	84.8
- rationale for billing and reimbursement	291	449	700	4.45	4.37	4.44	0.73	0.89	0.88	97.9	89.2	83.2
- disclosure and consent (e.g., disclosure of medical information, consent for treatment)	279	449	700	4.27	4.47	4.45	0.82	0.85	0.88	95.3	88.6	82.3
- letter of medical necessity (e.g., wheelchair, assistive equipment, disability parking placard)	251	449	700	3.86	4.02	3.89	0.95	1.07	1.18	91.2	76.0	69.7
- intervention/plan of care for specialized services and settings (e.g., individual education plan,	219	449	700	3.81	4.28	4.14	1.08	1.02	1.15	87.2	67.0	62.6

PT WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
individual family service plan, vocational transition plan)												
Assign billing codes for physical therapy evaluation and treatment provided	280	454	702	4.42	4.53	4.52	0.83	0.81	0.91	96.4	88.8	82.1
Education												
<i>Educate patient/client and/or caregiver about</i>												
- the patient/client's current condition and health status (e.g., nature of the condition, prognosis, potential benefits of physical therapy interventions, potential treatment outcomes)	300	446	698	4.60	4.84	4.82	0.57	0.41	0.46	99.7	89.2	85.0
- the role of the physical therapist and/or physical therapist assistant in patient/client management	301	446	698	4.56	4.75	4.73	0.62	0.55	0.57	99.3	89.0	84.8
- lifestyle and behavioral changes to promote wellness (e.g., nutrition, physical activity, tobacco cessation)	301	446	698	4.33	4.48	4.47	0.73	0.77	0.79	98.0	88.6	84.5
- the role of physical therapy in transitional planning (e.g., hospice, palliative care, setting changes)	264	446	698	3.97	4.13	4.08	0.98	1.11	1.15	90.9	77.6	71.6
<i>Educate the healthcare team about</i>												
- the role of the physical therapist and/or physical therapist assistant in patient/client management	291	446	698	4.15	4.49	4.37	0.87	0.85	0.95	94.5	85.8	82.6
- safe patient handling (e.g., injury prevention, ergonomics, use of equipment)	282	446	698	4.12	4.49	4.44	0.87	0.83	0.89	96.1	84.8	80.8
Educate community groups on lifestyle and behavioral changes to promote wellness (e.g., nutrition, physical activity, tobacco cessation)	241	446	697	3.68	3.66	3.59	1.04	1.08	1.16	88.0	72.2	67.5
Participate in the clinical education of students	260	446	697	3.78	3.98	4.00	1.09	1.00	1.02	88.1	74.0	73.4
Patient/client & Staff Safety												
Emergency Procedures												
Implement emergency procedures (e.g., CPR, AED, calling a code)	224	446	697	4.20	4.23	4.03	0.92	0.93	1.08	94.2	74.6	77.7
Perform first aid	245	446	697	4.00	4.00	3.84	0.98	1.05	1.11	92.2	76.4	76.4
Implement disaster response procedures	199	446	697	3.68	3.74	3.65	1.11	1.12	1.17	83.9	67.8	70.6

PT WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Environmental Safety												
Perform risk assessment of the physical environment (e.g., barrier-free environment, outlets, windows, floors, lighting)	243	429	666	3.76	4.14	4.10	0.98	0.96	1.08	89.7	83.4	74.0
Prepare and maintain a safe working environment for performing interventions (e.g., unobstructed walkways, equipment availability)	266	429	666	4.17	4.40	4.44	0.91	0.86	0.85	93.6	85.7	76.9
Perform regular equipment inspections and/or maintenance (e.g., modalities, assistive devices)	248	429	666	3.75	3.94	4.10	1.01	1.05	1.04	87.5	81.6	71.2
Infection Control												
Perform and/or train patient/client and/or caregiver on appropriate infection control practices (e.g., universal precautions, hand hygiene, isolation, airborne precautions, equipment cleaning)	259	429	666	3.88	4.11	4.06	0.99	1.08	1.14	89.6	80.6	72.0
Research & Evidence-Based Practice												
Search the literature for current best evidence	280	429	665	4.00	4.09	4.09	0.88	0.91	0.89	96.1	86.9	80.1
Evaluate the quality of published data	268	429	665	3.87	3.95	3.90	0.94	0.95	1.00	92.9	84.5	77.9
Integrate current best evidence, clinical experience, and patient values in clinical practice (e.g., clinical prediction rules, patient preference)	278	429	665	4.20	4.28	4.26	0.85	0.84	0.86	97.1	87.3	80.3
Design, direct, and/or participate in research activities	207	429	665	3.29	3.17	3.08	1.06	1.14	1.25	75.4	67.5	57.9
Compare intervention outcomes with normative data	235	429	665	3.62	3.60	3.59	1.06	1.06	1.08	85.5	77.5	70.6
Professional Responsibilities												
Supervise physical therapist assistant(s) and support personnel (licensed/unlicensed)	275	444	693	4.23	4.49	4.48	0.83	0.80	0.87	96.7	81.8	74.2
Assign tasks to other personnel (licensed/unlicensed) to assist with patient/client care	279	444	693	4.10	4.21	4.27	0.86	0.95	0.99	95.0	83.8	76.0
Discuss ongoing patient care with the interprofessional/interdisciplinary team members	293	444	693	4.26	4.55	4.54	0.81	0.76	0.75	98.3	87.8	83.3
Refer patient/client to specialists or other healthcare providers when necessary	290	444	693	4.18	4.52	4.46	0.79	0.71	0.79	98.3	87.6	83.2
Disclose financial interest in recommended products or services to the patient/client	208	444	693	3.26	3.73	3.67	1.25	1.21	1.28	72.6	64.0	59.6

PT WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Provide notice and information about alternative care when the physical therapist terminates provider relationship with the patient/client	266	444	693	3.59	4.01	4.07	1.02	1.04	1.05	86.8	80.4	76.1
Document transfer of patient/client care to another physical therapist (therapist of record)	247	444	693	3.52	3.94	3.90	1.11	1.14	1.19	81.8	75.4	72.7
Report healthcare providers that are suspected to not perform their professional responsibilities with reasonable skill and safety to the appropriate authorities	203	444	693	4.13	4.27	4.15	0.92	0.90	1.06	94.6	67.8	80.3
Report suspected cases of abuse to the appropriate authority	207	444	693	4.31	4.57	4.46	0.85	0.72	0.89	95.2	70.2	82.7
Report suspected illegal or unethical acts performed by healthcare providers to the relevant authority	195	443	691	4.30	4.59	4.47	0.83	0.74	0.86	95.4	70.2	82.9
Advocate for public access to physical therapy and other healthcare services	245	443	691	4.02	4.34	4.25	0.96	0.85	0.98	92.7	78.0	81.6
Determine own need for professional development	298	443	691	4.28	4.60	4.59	0.78	0.67	0.70	97.3	88.0	83.7
Participate in learning and/or development activities (e.g., journal clubs, self-directed reading, continuing competence activities) to maintain the currency of knowledge, skills, and abilities	297	443	691	4.22	4.46	4.45	0.82	0.78	0.82	96.3	87.8	83.6
Practice within the federal and jurisdiction regulations and professional standards	293	443	691	4.66	4.80	4.71	0.67	0.49	0.64	98.0	88.2	83.7
Participate in professional organizations	263	443	691	3.65	3.82	3.90	1.03	1.14	1.13	86.7	83.0	81.2
Perform community based screenings (e.g., fall risk, posture, musculoskeletal, flexibility, sports-specific)	241	443	691	3.61	3.87	3.79	1.00	1.06	1.18	87.6	74.6	73.7
Participate in performance improvement and quality reporting activities (e.g., Physician Quality Reporting System, standardized outcomes measurement, application of health informatics)	258	443	691	3.72	3.99	3.93	1.02	1.07	1.12	88.4	79.0	75.9

Note. Boldface mean (Red) indicates the mean importance value was less than 2.50. Light red shading indicates the 2019 mean importance value was below 2.50 (Criticality Threshold). Light orange shading indicates the 2019 mean importance value was between 2.50 (including) and 3.00 (excluding).

Table B.2. PTA Work Activity Survey Results

PTA WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
DATA COLLECTION												
Information Gathering & Synthesis												
<i>Interview patients/clients, caregivers, and family to obtain patient/client history and current information (e.g., medical, surgical, medications, social, cultural, language preference, economic) to</i>												
- review prior and current level of function/activity	263	264	515	4.21	4.55	4.54	0.84	0.76	0.74	96	99	98
- establish general health status	259	264	515	4.21	4.36	4.32	0.85	0.82	0.87	96	100	96
- identify red flags (e.g., fever, malaise, unexplained weight change) and contraindications	263	264	515	4.40	4.60	4.54	0.81	0.73	0.78	97	99	99
- identify patient/client's, family/caregiver's goals, values, and preferences	262	264	515	4.16	4.30	4.29	0.83	0.82	0.87	96	100	98
- determine impact of medications on plan of care (e.g., medication reconciliation, timing of intervention delivery, adherence)	262	264	515	3.98	3.78	3.92	0.96	1.11	1.07	92	96	93
Administer standardized questionnaires (e.g., pain inventory, fall risk assessment)	264	264	515	4.05	3.66	3.75	0.92	1.07	1.04	94	95	93
Review medical records (e.g., lab values, diagnostic tests, imaging, specialty reports, narrative, consults, physical therapy documentation) prior to carrying out the PT plan of care	268	264	515	4.42	4.10	4.14	0.76	0.96	0.98	98	98	97
Gather information/discuss patient/client's current health status with interprofessional/interdisciplinary team members	267	264	515	4.35	4.05	4.09	0.77	0.90	0.92	98	99	96
Identify signs/symptoms of change in patient/client's health status that require intervention by physical therapist	266	264	515	4.52	4.53	4.54	0.65	0.71	0.68	99	100	99
Identify signs/symptoms of change in patient/client's health status that require intervention by interprofessional/interdisciplinary team members	263	264	515	4.40	4.39	4.38	0.75	0.84	0.80	98	98	99
Systems Review												
Check patient/client's current affect, cognition, communication, and learning preferences (e.g., ability to convey needs, consciousness, orientation, expected emotional/behavioral responses)	232	264	515	4.28	4.15	4.24	0.72	0.94	0.88	99	99	98

PTA WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
<i>Recognize changes in status of the</i>												
- patient/client's quality of speech, hearing, and vision (e.g., dysarthria, pitch/tone, use of corrective lenses, use of hearing aids)	228	256	497	4.18	3.77	3.83	0.84	1.08	1.07	96	91	89
- vestibular system (e.g., dizziness, vertigo)	232	256	497	4.21	4.02	4.00	0.77	0.94	0.98	97	93	91
- gastrointestinal system (e.g., difficulty swallowing, nausea, change in appetite/diet, change in bowel function)	227	256	497	3.89	3.40	3.40	0.94	1.14	1.15	93	89	81
- genitourinary system (e.g., changes in bladder function, catheter complications)	215	256	497	3.78	3.43	3.36	1.07	1.18	1.13	89	84	80
- reproductive system (e.g., sexual and/or menstrual dysfunction, menopause status)	196	256	497	2.78	2.51	2.45	1.42	1.18	1.16	54	62	57
- cardiovascular/pulmonary system (e.g., blood pressure, heart rate, respiration rate)	231	256	497	4.54	4.40	4.31	0.63	0.82	0.91	100	96	95
- lymphatic system (e.g., primary and/or secondary edema)	230	256	497	4.07	3.84	3.74	0.91	0.96	1.07	95	91	88
- integumentary system (e.g., presence of scar formation, skin integrity, discoloration)	232	256	497	4.16	4.00	3.92	0.83	0.96	1.00	95	96	94
- musculoskeletal system (e.g., gross symmetry, strength, range of motion)	233	256	497	4.52	4.64	4.62	0.62	0.62	0.65	100	97	97
- neuromuscular system (e.g., gross coordination, motor function, balance, locomotion, gross sensory function)	223	256	497	4.49	4.70	4.63	0.63	0.59	0.62	100	97	97
Tests & Measures												
Cardiovascular/Pulmonary												
<i>Perform tests and measures of</i>												
- cardiovascular function (e.g., blood pressure, heart rate, heart sounds)	210	252	490	4.33	4.31	4.20	0.83	0.93	0.98	97	93	92
- pulmonary function (e.g., respiratory rate, breathing patterns, breath sounds, chest excursion)	200	252	490	4.08	4.09	3.97	0.98	1.06	1.02	91	88	87
- perfusion and gas exchange (e.g., oxygen saturation)	197	252	490	4.07	4.09	4.02	1.09	1.08	1.05	91	86	86
- peripheral circulation (e.g., capillary refill, blood pressure in upper versus lower extremities)	182	252	490	3.45	3.48	3.42	1.19	1.24	1.15	78	77	80
- critical limb ischemia (e.g., peripheral pulses, skin perfusion pressure)	178	252	490	3.48	3.39	3.35	1.17	1.26	1.20	76	74	76

PTA WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
- physiological responses to position change (e.g., orthostatic hypotension, skin color, blood pressure, heart rate)	206	252	490	4.08	4.24	4.17	0.92	0.90	0.93	93	92	91
- aerobic capacity under maximal and submaximal conditions (e.g., endurance, exercise tolerance, metabolic equivalents, perceived exertion)	197	252	490	3.69	3.82	3.94	1.18	1.11	1.03	83	87	88
Anthropometric												
<i>Perform tests and measures of</i>												
- body composition (e.g., percent body fat, lean muscle mass)	161	252	490	2.72	2.55	2.58	1.39	1.20	1.13	53	62	63
- body dimensions (e.g., height, weight, girth, limb length, head circumference/shape)	183	252	490	3.10	2.66	2.70	1.22	1.20	1.10	68	70	70
Quantify and qualify edema (e.g., pitting, volume, circumference)	202	252	490	3.51	3.47	3.42	1.02	1.12	1.07	86	88	84
Arousal, Attention, & Cognition												
<i>Perform tests and measures of</i>												
- arousal and orientation (e.g., level of consciousness, time, person, place, situation)	186	246	472	3.80	3.89	3.78	1.05	1.11	1.17	90	83	80
- attention and cognition (e.g., ability to process commands, delirium, confusion)	181	246	472	3.78	3.96	3.90	1.01	1.01	1.03	89	86	85
- communication (e.g., expressive and receptive skills, following instructions)	178	246	472	3.72	3.93	3.90	1.03	1.04	1.00	89	88	87
- recall (including memory and retention)	173	246	472	3.59	3.63	3.51	1.13	1.07	1.09	84	84	83
Nerve Integrity												
<i>Perform tests and measures of</i>												
- cranial nerve integrity (e.g., facial asymmetry, oculomotor function, hearing)	155	246	472	3.27	3.36	3.20	1.27	1.19	1.15	72	73	70
- spinal nerve integrity (e.g., dermatome, myotome)	169	246	472	3.46	3.60	3.46	1.16	1.08	1.17	78	81	76
- peripheral nerve integrity (e.g., sensation, strength)	185	246	472	3.75	3.88	3.79	0.98	1.01	1.01	89	88	82
- neural provocation (e.g., tapping, tension, stretch)	169	246	472	3.47	3.61	3.43	1.09	1.03	1.13	83	87	79
Environmental & Community Integration/Reintegration (Home, Work, Job, School, Play, & Leisure)												
Collect data on patient/client's ability to perform activities of daily living (ADL) (e.g., bed mobility, transfers, household mobility, dressing, self-care, toileting, sexual relations)	196	242	460	4.37	4.38	4.38	0.71	0.90	0.88	98	90	86

PTA WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Collect data on patient/client's ability to perform instrumental activities of daily living (IADL) (e.g., household chores, hobbies)	195	242	460	4.04	4.07	4.09	0.95	1.02	0.99	92	89	86
Collect data on patient/client's ability to perform skills needed for integration or reintegration into the community, work, or school	175	242	460	3.89	4.09	4.16	1.03	0.96	0.97	91	89	85
Collect data on barriers (e.g., social, economic, physical, psychological, environmental, work conditions and activities) to home, community, work, or school integration/reintegration	171	242	460	3.78	3.88	3.97	1.03	1.05	1.07	89	86	84
Collect data on safety in home, community, work, or school environments	176	242	460	3.89	4.05	4.14	1.02	1.04	0.99	90	88	84
Collect data on patient/client's ability to participate in activities with or without the use of devices, equipment, or technologies	181	242	460	4.06	4.19	4.30	0.87	0.95	0.82	94	90	87
Ergonomics and Body Mechanics												
<i>Perform tests and measures of</i>												
- ergonomics and body mechanics during functional activities	183	240	452	3.95	4.36	4.37	0.96	0.88	0.79	90	91	87
- postural alignment and position (static and dynamic)	183	240	452	4.08	4.43	4.43	0.88	0.77	0.78	93	91	87
Functional Mobility, Balance, & Vestibular												
<i>Perform tests and measures of</i>												
- balance (dynamic and static) with or without the use of specialized equipment	185	240	452	4.30	4.63	4.63	0.67	0.62	0.57	99	91	87
- gait and locomotion (e.g., ambulation, wheelchair mobility) with or without the use of specialized equipment	185	240	452	4.42	4.70	4.68	0.63	0.58	0.57	99	90	87
- mobility during functional activities and transitional movements (e.g., transfers, bed mobility)	187	240	452	4.39	4.66	4.63	0.67	0.63	0.64	98	89	87
- vestibular function (e.g., peripheral dysfunction, central dysfunction, BPPV)	159	240	452	3.62	3.76	3.82	1.10	1.12	1.06	82	80	78
Integumentary Integrity												
Observe skin characteristics (e.g., continuity of skin color, sensation, temperature, texture, turgor)	173	239	450	3.92	3.73	3.81	0.84	1.05	1.05	95	88	81

PTA WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Collect data on wound characteristics (e.g., tissue involvement, depth, tunneling, burn classification, ulcer/injury classification)	139	239	450	3.61	3.22	3.23	1.19	1.25	1.29	84	71	58
Observe scar tissue characteristics (e.g., banding, pliability, sensation, and texture)	162	239	450	3.59	3.30	3.26	1.04	1.20	1.20	86	77	69
Collect data on patient/client's activities, positioning, and postures that produce or relieve trauma to the skin	163	239	450	3.87	3.83	3.83	0.99	1.12	1.13	91	80	75
Identify devices and equipment that produce or relieve trauma to the patient/client's skin	164	239	450	3.79	3.79	3.74	1.02	1.12	1.15	90	79	73
Joint Integrity & Range of Motion												
<i>Perform tests and measures of</i>												
- spinal joint stability (e.g., ligamentous integrity, joint structure)	146	237	444	3.59	3.78	3.74	1.20	1.09	1.11	83	76	71
- peripheral joint stability (e.g., ligamentous integrity, joint structure)	157	237	444	3.71	3.96	3.88	1.06	1.01	1.05	87	81	77
- spinal joint mobility (e.g., glide, end feel)	143	237	444	3.62	3.62	3.67	1.21	1.22	1.14	83	73	71
- peripheral joint mobility (e.g., glide, end feel)	163	237	444	3.83	3.88	3.89	1.01	1.09	1.07	88	81	77
- range of motion (e.g., passive, active, functional)	180	237	444	4.30	4.54	4.54	0.75	0.71	0.72	99	89	85
- flexibility (e.g., muscle length, soft tissue extensibility)	157	237	444	4.00	4.35	4.36	0.85	0.87	0.83	95	88	84
Motor Function												
<i>Perform tests and measures of</i>												
- muscle tone (e.g., hypertonicity, hypotonicity, dystonia)	152	235	442	3.85	3.97	3.94	0.91	1.06	0.99	93	83	79
- dexterity, coordination, and agility (e.g., rapid alternating movement, finger to nose)	145	235	442	3.72	3.68	3.62	0.99	1.13	1.10	88	80	77
- ability to initiate, modify and control movement patterns and postures (e.g., catching a ball, gait)	164	235	442	4.08	4.23	4.20	0.81	0.89	0.91	97	88	83
- ability to change movement performance with practice (e.g., motor learning)	156	235	442	3.90	4.17	4.15	0.84	0.91	0.88	96	87	83
- movement quality (e.g., purpose, precision, efficiency, biomechanics, kinematics)	151	235	442	3.90	4.11	4.13	0.89	0.93	0.90	95	88	83
Muscle Performance												
<i>Perform tests and measures of</i>												
- muscle strength, power, and endurance without specialized equipment (e.g., manual muscle test, functional strength testing)	162	235	442	4.12	4.30	4.36	0.83	0.92	0.80	96	87	84

PTA WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
- muscle strength, power, and endurance with specialized equipment (e.g., isokinetic testing, dynamometry)	137	235	442	3.60	3.74	3.81	1.21	1.27	1.19	82	71	70
Neuromotor Development & Sensory Integration												
<i>Perform tests and measures of</i>												
- acquisition and evolution of motor skills throughout the lifespan	114	235	442	3.19	3.44	3.51	1.34	1.18	1.16	69	74	68
- sensorimotor integration	125	235	442	3.24	3.52	3.54	1.30	1.11	1.06	68	77	72
- developmental reflexes and reactions (e.g., asymmetrical tonic neck reflex, righting reactions)	115	235	442	3.29	3.42	3.32	1.26	1.22	1.20	70	67	63
Reflex Integrity												
<i>Perform tests and measures of</i>												
- deep tendon/muscle stretch reflexes (e.g., quadriceps, biceps)	134	233	437	3.40	3.53	3.42	1.10	1.18	1.18	77	73	70
- upper motor neuron integrity (e.g., Babinski reflex, Hoffman sign)	119	233	436	3.22	3.28	3.09	1.26	1.22	1.25	70	62	57
- superficial reflexes and reactions (e.g., cremasteric reflex, abdominal reflexes)	108	233	436	3.07	3.11	2.96	1.36	1.26	1.27	65	59	54
Pain & Sensory Integrity												
<i>Perform tests and measures of</i>												
- pain (e.g., location, intensity, frequency, central, peripheral, psychogenic)	148	233	436	4.01	4.38	4.30	0.88	0.87	0.88	96	84	81
- deep sensation (e.g., proprioception, kinesthesia, pressure)	143	233	436	3.51	3.76	3.59	1.03	1.14	1.16	85	74	72
- superficial sensation (e.g., touch, temperature discrimination)	147	233	436	3.50	3.63	3.59	0.93	1.17	1.15	86	76	72
Plan of Care & Goals												
Modify and/or progress within the plan of care based on patient/client's resources (e.g., financial, transportation, time, insurance benefits, available technologies)	156	232	434	4.18	4.25	4.30	0.96	0.97	0.96	94	82	77
INTERVENTIONS												
Procedural Interventions												
Therapeutic Exercise/Therapeutic Activities												
<i>Perform and/or train patient/client/caregiver in</i>												
- aerobic capacity/endurance conditioning	269	293	534	4.10	4.00	4.12	0.80	0.97	0.99	96	98	96
- balance, coordination, and agility activities	278	293	534	4.55	4.60	4.67	0.57	0.64	0.60	100	100	100

PTA WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
- body mechanics and postural stabilization techniques	279	293	534	4.49	4.58	4.57	0.62	0.68	0.70	100	100	100
- flexibility techniques	276	293	534	4.12	3.84	3.83	0.80	1.03	1.05	98	98	97
- neuromotor techniques (e.g., movement pattern training, neuromuscular education or reeducation)	276	293	534	4.16	4.06	4.14	0.80	0.99	0.93	97	98	99
- relaxation techniques	271	293	534	3.62	3.36	3.36	0.91	1.13	1.17	91	94	94
- strength, power, and endurance exercises	273	293	534	4.46	4.26	4.35	0.66	0.80	0.86	99	100	99
- genitourinary management (e.g., pelvic floor exercises, bladder strategies)	249	293	533	3.06	2.67	2.68	1.18	1.23	1.20	65	55	57
- gastrointestinal management (e.g., bowel strategies, positioning to avoid reflux)	240	293	533	2.85	2.42	2.54	1.18	1.15	1.19	55	48	51
- manual/mechanical airway clearance techniques (e.g., assistive devices, assistive cough, incentive spirometer, flutter valve, postural drainage, percussion, vibration)	247	293	533	3.17	2.71	2.75	1.26	1.33	1.27	65	54	54
- techniques to maximize ventilation and perfusion (e.g., positioning, active cycle breathing, autogenic drainage, paced breathing, pursed-lip breathing)	228	293	533	3.58	3.09	3.17	1.16	1.22	1.25	84	73	69
- mechanical repositioning for vestibular dysfunction	211	293	533	3.13	2.78	2.88	1.27	1.15	1.25	68	59	62
- habituation/adaptation exercises for vestibular dysfunction	206	293	533	3.14	2.81	3.01	1.26	1.19	1.25	67	64	65
Functional Training												
<i>Perform and/or train patient/client in</i>												
- the use of environmental modifications (e.g., ramps, grab bars, raised toilet, environmental control units)	236	289	525	4.13	4.09	3.97	0.86	1.12	1.25	96	88	86
- activities of daily living (ADL) (e.g., bed mobility, transfers, household mobility, dressing, self-care, toileting, sexual relations)	245	289	525	4.43	4.35	4.30	0.77	0.98	1.05	98	95	93
- community and leisure integration or reintegration (e.g., work/school/play)	224	289	525	3.76	3.68	3.73	1.06	1.07	1.18	90	89	87
- Instrumental Activities of Daily Living (IADL) (e.g., household chores, hobbies)	229	289	525	3.86	3.87	3.93	0.98	1.06	1.08	92	92	92
- mobility techniques	245	289	525	4.33	4.30	4.26	0.79	0.82	0.89	98	97	97
- gross motor developmental progression			525			3.68			1.15			87
- fall prevention and fall recovery strategies	242	289	525	4.45	4.55	4.45	0.72	0.68	0.89	99	98	96

PTA WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
- behavior modification and strategies that enhance functioning (e.g., energy conservation, pacing, pre-activity planning, reminder schedules)	237	289	525	4.04	3.91	3.83	0.88	1.09	1.13	95	90	91
Manual Therapy Techniques												
Perform manual lymphatic drainage	174	285	518	3.00	2.61	2.61	1.29	1.14	1.22	64	44	40
Perform spinal manual traction	186	285	518	3.45	3.12	3.12	1.26	1.24	1.26	78	63	61
Perform peripheral manual traction	183	285	518	3.34	3.11	3.02	1.33	1.26	1.28	72	63	59
Perform and/or train patient/client/caregiver in soft tissue mobilization (e.g., connective tissue massage, therapeutic massage, foam rolling)	227	285	517	3.90	3.53	3.56	0.93	1.28	1.23	95	84	82
Perform instrument-assisted soft tissue mobilization	193	285	517	3.42	3.32	3.41	1.19	1.25	1.30	79	69	71
Perform peripheral joint range of motion	227	285	517	4.31	4.13	4.08	0.81	1.08	1.07	97	91	88
Perform peripheral mobilization/manipulation (thrust)	166	285	517	3.06	2.92	2.96	1.47	1.37	1.37	63	41	40
Perform peripheral mobilization (non-thrust)	188	285	517	3.55	3.45	3.38	1.22	1.33	1.37	81	67	65
Perform spinal mobilization/manipulation (thrust)	153	285	517	2.88	2.56	2.60	1.44	1.34	1.29	58	32	32
Perform spinal mobilization (non-thrust)	170	285	517	3.27	3.26	3.21	1.39	1.36	1.39	70	57	55
<i>Apply taping for</i>												
- neuromuscular reeducation	176	284	514	3.26	4.10	4.09	1.13	1.04	1.13	77	81	80
- lymphatic drainage	150	284	514	2.87	3.01	2.83	1.35	1.34	1.23	61	47	45
- pain management	174	284	514	3.22	4.06	4.10	1.17	1.14	1.04	74	82	83
Equipment & Devices												
<i>Apply and/or adjust</i>												
- adaptive devices (e.g., utensils, seating and positioning devices, steering wheel devices)	187	283	504	3.39	3.65	3.59	1.21	1.30	1.33	78.1	71.7	66.7
- protective devices (e.g., braces, cushions, helmets, protective taping)	203	283	504	3.65	3.70	3.65	1.08	1.18	1.18	86.7	82.6	80.5
- supportive devices (e.g., compression garments, corsets, elastic wraps, neck collars serial casts, short-stretch bandages)	207	283	504	3.57	3.57	3.53	1.05	1.16	1.26	84.5	84.0	78.1
- orthotic devices (e.g., braces, shoe inserts, splints)	211	283	503	3.82	3.91	3.81	0.97	1.04	1.12	91.5	89.8	86.9
<i>Apply and/or adjust</i>												
- assistive devices/technologies (e.g., canes, crutches, walkers, wheelchairs, tilt tables, standing frames)	221	283	504	4.29	4.57	4.49	0.75	0.74	0.84	98.6	95.9	92.9
- prosthetic devices/technologies (e.g., lower-extremity and upper-extremity prostheses, microprocessor-controlled prosthetic devices)	179	283	504	3.46	3.64	3.62	1.18	1.19	1.25	77.1	74.1	72.3

PTA WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
- mechanical neuromuscular re-education devices/technologies (e.g., weighted vests, therapeutic suits, body weight supported treadmill)	149	283	504	2.99	3.12	3.13	1.33	1.35	1.42	62.4	50.2	50.6
- prescribed oxygen during interventions	186	283	504	4.02	4.02	3.98	1.13	1.20	1.22	89.8	70.0	66.5
- Train patient/client/caregiver in the use of												
- adaptive devices (e.g., utensils, seating and positioning devices, steering wheel devices)	167	277	493	3.49	3.60	3.59	1.20	1.33	1.35	81.4	63.5	62.4
- assistive devices/technologies (e.g., canes, crutches, walkers, wheelchairs, tilt tables, standing frames)	206	276	493	4.35	4.55	4.50	0.72	0.76	0.87	99.5	92.5	89.1
- orthotic devices (e.g., braces, shoe inserts, splints)	193	276	493	3.82	4.04	3.99	0.91	1.02	1.12	93.8	88.1	85.4
- prosthetic devices/technologies (e.g., lower-extremity and upper-extremity prostheses, microprocessor-controlled prosthetic devices)	154	276	493	3.40	3.65	3.61	1.28	1.22	1.34	77.3	66.2	67.6
- protective devices (e.g., braces, cushions, helmets, protective taping)	175	276	493	3.50	3.62	3.64	1.12	1.24	1.29	81.1	74.1	74.0
- supportive devices (e.g., compression garments, corsets, elastic wraps, neck collars, serial casts, short-stretch bandages)	187	276	493	3.45	3.66	3.65	1.05	1.14	1.27	85.6	78.8	74.0
- mechanical neuromuscular re-education devices/technologies (e.g., weighted vests, therapeutic suits, body weight supported treadmill)	133	276	493	2.83	3.31	3.25	1.36	1.35	1.46	55.6	47.8	49.8
Integumentary Repair & Protection Techniques												
<i>Perform and/or train patient/client/caregiver in</i>												
- nonselective debridement (e.g., removal of nonselective areas of devitalized tissue)	127	272	492	2.53	2.67	2.46	1.44	1.35	1.32	46.5	20.8	18.2
- selective enzymatic or autolytic debridement (e.g., removal of specific areas of devitalized tissue)	122	271	491	2.48	2.65	2.38	1.45	1.36	1.29	43.4	19.5	17.6
- sharp debridement (e.g., removal of specific areas of devitalized tissue)	117	271	491	2.27	2.64	2.25	1.38	1.38	1.26	34.2	16.4	16.1
- application of topical agents (e.g., cleansers, creams, moisturizers, ointments, sealants) and dressings (e.g., hydrogels, wound coverings)	135	271	491	2.68	2.85	2.66	1.33	1.32	1.25	48.9	36.2	35.2
- desensitization techniques (e.g., brushing, tapping, use of textures)	159	271	491	2.91	2.99	2.98	1.20	1.21	1.20	61.6	58.7	56.7
- hyperbaric therapy	118	271	491	2.28	2.52	2.19	1.37	1.31	1.22	38.1	15.7	14.4
- negative pressure wound therapy	118	271	491	2.28	2.61	2.31	1.33	1.30	1.31	35.6	18.8	15.7

PTA WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Therapeutic Modalities												
<i>Perform and/or train patient/client/caregiver in</i>												
- biofeedback therapy (e.g., relaxation techniques, muscle reeducation, EMG)	170	270	491	3.41	3.42	3.36	1.05	1.21	1.31	82.9	67.6	65.2
- iontophoresis	147	270	491	3.01	3.02	2.76	1.30	1.39	1.38	66.7	51.2	42.1
- phonophoresis	133	270	488	2.82	2.85	2.62	1.40	1.38	1.39	60.2	31.7	26.6
- electrotherapy modalities, excluding iontophoresis (e.g., NMES, TENS, FES, interferential therapy, high-voltage pulsed current)*	191	270	491	3.93	4.05	3.98	0.98	1.15	1.16	91.1	80.2	80.5
- cryotherapy (e.g., cold pack, ice massage, vapocoolant spray)	195	270	491	3.87	4.01	3.87	0.97	1.12	1.18	92.8	86.3	85.2
- hydrotherapy using contrast baths/pools	126	270	491	2.98	2.90	2.74	1.31	1.41	1.48	61.9	33.8	31.6
- hydrotherapy (e.g., aquatic exercise, underwater treadmill)	134	270	491	3.13	3.31	3.18	1.30	1.38	1.50	64.9	41.3	35.4
- phototherapy (laser light)	120	270	491	2.58	2.58	2.65	1.39	1.26	1.46	46.7	27.3	25.1
- monochromatic infrared agent procedures (e.g., light emitting diodes [LEDs])	116	270	488	2.44	2.57	2.29	1.35	1.35	1.35	43.1	20.5	17.6
- ultrasound procedures	185	270	488	3.69	3.58	3.39	1.05	1.35	1.36	87.0	73.7	67.0
- diathermy	128	270	488	2.62	3.04	2.76	1.30	1.41	1.46	50.8	30.7	30.1
- dry heat thermotherapy (e.g., Fluidotherapy)	118	270	488	2.54	2.95	2.62	1.31	1.34	1.42	46.6	30.0	25.3
- hot pack thermotherapy	185	270	488	3.76	3.84	3.89	1.02	1.25	1.19	91.4	82.9	77.0
- paraffin bath thermotherapy	138	270	488	2.80	3.12	2.89	1.29	1.38	1.44	56.5	39.9	37.5
- shockwave therapy	111	270	488	2.15	2.51	2.20	1.32	1.34	1.39	33.3	15.0	15.4
Mechanical Modalities												
<i>Apply and/or train patient/client/caregiver in</i>												
- intermittent pneumatic compression	127	270	487	2.67	3.11	2.82	1.33	1.31	1.35	52.8	38.9	34.8
- assisted movement devices (e.g., dynamic splint, continuous passive motion devices)	152	270	487	3.13	3.15	3.13	1.24	1.32	1.29	69.7	52.6	51.5
- mechanical spinal traction	138	270	487	3.30	3.57	3.14	1.28	1.30	1.35	73.2	53.9	48.1
Non-procedural Interventions												
Communication												
<i>Discuss physical therapy evaluation findings, interventions, goals, prognosis, discharge planning, and plan of care with</i>												
- the supervising physical therapist	201	269	486	4.65	4.81	4.74	0.61	0.54	0.63	99.5	91.8	87.6
- interprofessional/interdisciplinary team members	194	269	486	4.52	4.53	4.51	0.71	0.73	0.84	99.0	90.4	87.1
- patient/client/caregiver	198	269	486	4.56	4.73	4.70	0.62	0.60	0.65	99.5	91.5	89.9

PTA WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Provide written, oral, and electronic information to the patient/client and/or caregiver	192	269	486	4.43	4.60	4.57	0.80	0.75	0.81	97.9	90.1	88.8
Documentation												
<i>Document</i>												
- data collection results	188	268	486	4.41	4.45	4.44	0.85	0.87	0.88	96.3	90.1	86.3
- intervention(s) and patient/client response(s) to intervention	198	268	486	4.60	4.73	4.69	0.62	0.63	0.61	99.5	90.8	90.6
- patient/client/caregiver education	196	268	486	4.55	4.67	4.63	0.62	0.67	0.68	99.5	91.1	90.4
- communication with the interdisciplinary/interprofessional team related to the patient/client's care	194	268	486	4.46	4.40	4.51	0.68	0.88	0.81	99.0	90.1	89.3
- rationale for billing and reimbursement	188	268	486	4.44	4.32	4.42	0.84	0.96	0.88	96.8	87.0	84.8
- disclosure and consent (e.g., disclosure of medical information, consent for treatment)	170	268	486	4.21	4.26	4.32	1.00	1.01	0.98	93.5	84.6	82.6
Assign billing codes for physical therapy treatment provided	157	268	486	4.04	4.29	4.34	1.19	1.07	1.06	88.5	77.5	74.9
Education												
<i>Educate patient/client and/or caregiver about</i>												
- the patient/client's current condition and health status (e.g., nature of the condition, potential benefits of physical therapy interventions, potential treatment outcomes)	197	266	486	4.40	4.69	4.69	0.73	0.60	0.59	99.0	90.8	90.4
- the role of the physical therapist and/or physical therapist assistant in patient/client management	197	266	486	4.26	4.54	4.56	0.84	0.77	0.73	97.0	90.8	90.8
- lifestyle and behavioral changes to promote wellness (e.g., nutrition, physical activity, tobacco cessation)	194	266	486	4.20	4.34	4.36	0.84	0.91	0.89	97.4	89.1	89.9
- the role of physical therapy in transitional planning (e.g., hospice, palliative care, setting changes)	170	266	486	3.82	4.00	4.01	1.08	1.10	1.18	89.4	77.8	78.7
<i>Educate the healthcare team about</i>												
- the role of the physical therapist and/or physical therapist assistant in patient/client management	171	266	486	3.92	4.25	4.28	1.03	0.95	0.98	90.1	86.0	86.7
- safe patient handling (e.g., injury prevention, ergonomics, use of equipment)	181	266	486	4.13	4.46	4.63	0.89	0.85	0.71	96.7	86.3	90.3
- Educate community groups on lifestyle and behavioral changes to promote wellness (e.g., nutrition, physical activity, tobacco cessation)	140	266	483	3.72	3.78	3.67	1.19	1.13	1.17	85.0	65.9	67.2

PTA WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Participate in the clinical education of students	149	266	483	3.81	3.95	3.70	1.18	1.03	1.18	85.9	70.6	65.4
Patient/client & Staff Safety												
Emergency Procedures												
Implement emergency procedures (e.g., CPR, AED, calling a code)	144	266	483	4.27	4.16	4.06	0.97	1.07	1.12	94.4	72.7	80.3
Perform first aid	145	266	483	4.13	4.05	3.89	1.00	1.13	1.22	93.8	70.3	76.6
Implement disaster response procedures	131	266	483	4.02	3.88	3.70	1.08	1.18	1.22	90.1	64.5	74.5
Environmental Safety												
Perform risk assessment of the physical environment (e.g., barrier-free environment, outlets, windows, floors, lighting)	149	266	483	4.01	3.94	3.87	1.12	1.17	1.17	89.3	71.7	72.1
Prepare and maintain a safe working environment for performing interventions (e.g., unobstructed walkways, equipment availability)	191	266	483	4.38	4.37	4.34	0.78	0.93	0.95	97.9	85.3	85.0
Perform regular equipment inspections and/or maintenance (e.g., modalities, assistive devices)	171	266	483	4.18	4.12	4.08	0.95	1.04	1.06	94.7	79.2	77.5
Infection Control												
Perform and/or train patient/client and/or caregiver on appropriate infection control practices (e.g., universal precautions, hand hygiene, isolation, airborne precautions, equipment cleaning)	152	232	434	4.01	4.02	3.94	0.95	1.18	1.13	93.4	79.9	71.8
Research & Evidence-Based Practice												
Search the literature for current best evidence	160	232	434	3.76	3.71	3.66	1.00	1.06	1.08	87.5	79.5	75.0
Evaluate the quality of published data	147	232	434	3.44	3.47	3.43	1.13	1.15	1.20	77.6	72.0	67.2
Integrate current best evidence, clinical experience, and patient values in clinical practice (e.g., clinical prediction rules, patient preference)	160	232	434	3.84	3.91	3.91	0.99	1.04	1.05	86.9	79.9	75.3
Design and/or direct research activities	103	232	434	2.80	2.84	2.82	1.37	1.22	1.19	57.3	48.5	43.5
Participate in research activities	110	232	433	2.94	2.70	2.79	1.34	1.24	1.18	58.2	44.7	45.8
Compare intervention outcomes with normative data	117	232	433	3.05	3.02	2.99	1.27	1.24	1.18	65.8	51.9	50.5
Professional Responsibilities												
Supervise support personnel (e.g., physical therapy aide/technician)	137	232	433	3.60	3.51	3.58	1.13	1.21	1.21	83.2	66.7	53.6
Assign tasks to other personnel (e.g., physical therapy aide/technician) to assist with patient/client care	143	232	433	3.57	3.42	3.44	1.20	1.20	1.22	80.4	69.3	55.5

PTA WAs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Disclose financial interest in recommended products or services to patient/client	114	232	433	2.81	3.00	2.98	1.39	1.30	1.30	56.1	53.4	42.7
Communicate with the physical therapist when the expectations of the PTA are beyond their knowledge, skills, and abilities	162	232	433	4.48	4.58	4.60	0.65	0.72	0.73	99.4	85.6	83.1
Report healthcare providers that are suspected to not perform their professional responsibilities with reasonable skill and safety to the appropriate authorities	125	232	433	4.34	4.45	4.39	0.91	0.89	0.94	96.0	73.9	80.4
Report suspected cases of abuse to the appropriate authority	126	232	433	4.50	4.64	4.67	0.81	0.71	0.72	96.8	76.1	82.5
Report suspected illegal or unethical acts performed by healthcare providers to the relevant authority	117	232	433	4.44	4.62	4.61	0.93	0.71	0.77	95.7	75.0	82.1
Advocate for public access to physical therapy and other healthcare services	124	231	431	3.94	3.96	3.98	1.14	1.08	1.11	87.9	73.9	70.3
Determine own need for professional development	163	231	431	4.21	4.27	4.36	0.81	0.90	0.86	96.9	85.2	82.5
Participate in learning and/or development activities (e.g., journal clubs, self-directed reading, continuing competence activities) to maintain the currency of knowledge, skills, and abilities	160	231	431	4.17	4.24	4.30	0.84	0.95	0.95	96.9	84.5	81.7
Practice within the federal and jurisdiction regulations and professional standards	162	231	431	4.76	4.68	4.75	0.50	0.68	0.62	99.4	87.1	83.1
Participate in professional organizations	134	231	431	3.52	3.56	3.45	1.01	1.27	1.21	82.8	74.6	75.7
Participate in performance improvement and quality reporting activities (e.g., Physician Quality Reporting System, standardized outcomes measurement, application of health informatics)	122	231	431	3.57	3.76	3.72	1.07	1.16	1.18	85.2	73.5	70.1

Note. Boldface mean (Red) indicates the mean importance value was less than 2.50. Light red shading indicates the 2019 mean importance value was below 2.50 (Criticality Threshold). Light orange shading indicates the 2019 mean importance value was between 2.50 (including) and 3.00 (excluding).

Table B.3. PT Knowledge and Skill Requirements Survey Results

PT KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
CARDIOVASCULAR/PULMONARY SYSTEM												
Physical Therapy Examination												
Cardiovascular/pulmonary system tests/measures, including outcome measures, and their applications according to current best evidence	1,019	274	1,032	3.73	3.88	4.06	1.00	0.96	0.94	86.8	99.6	99.8
Anatomy and physiology of the cardiovascular/pulmonary system as related to tests/measures	1,021	274	1,032	3.80	3.85	4.05	0.98	0.94	0.93	89.5	100.0	99.9
Movement analysis as related to the cardiovascular/pulmonary system (e.g., rib cage excursion, breathing pattern)	1,020	274	1,032	3.68	3.74	3.93	0.98	0.97	0.94	87.4	99.3	99.8
Foundations for Evaluation, Differential Diagnosis and Prognosis												
Differential diagnoses related to diseases/conditions of the cardiovascular/pulmonary systems	1,018	274	1,032	3.79	3.90	4.08	0.98	0.97	0.89	89.0	99.3	100.0
Cardiovascular/pulmonary system diseases/conditions and their pathophysiology to establish and carry out plan of care, including prognosis	1,021	274	1,032	3.86	3.86	4.07	0.96	0.96	0.87	90.3	99.6	99.8
Non-pharmacological medical management of the cardiovascular/pulmonary system (e.g., diagnostic imaging, laboratory test values, other medical tests, surgical procedures)	1,012	274	1,032	3.25	3.35	3.54	0.99	1.00	0.98	76.2	98.2	99.4
The impact of pharmacology used to treat the cardiovascular/pulmonary system on physical therapy management	1,008	274	1,032	3.10	3.11	3.72	0.97	0.99	0.93	70.8	96.0	99.4
Interventions												
Cardiovascular/pulmonary system physical therapy interventions and their applications for rehabilitation, health promotion, and performance according to current best evidence	1,021	274	1,032	4.09	4.03	4.14	0.96	0.98	0.89	93.0	99.6	99.6
Anatomy and physiology of the cardiovascular/pulmonary system as related to physical therapy interventions, daily activities, and environmental factors	1,021	274	1,032	4.19	4.08	4.23	0.88	0.90	0.82	95.2	99.3	99.9

PT KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Adverse effects or complications on the cardiovascular/pulmonary system from physical therapy interventions	1,022	274	1,032	4.38	4.37	4.49	0.82	0.77	0.71	96.7	99.6	99.9
Adverse effects or complications on the cardiovascular/pulmonary system from physical therapy interventions used on other systems	927	262	974	4.21	4.44	4.53	0.87	0.75	0.68	95.6	95.6	94.4
LYMPHATIC SYSTEM												
Physical Therapy Examination												
Lymphatic system tests/measures, including outcome measures, and their applications according to current best evidence	955	267	989	2.77	2.90	3.08	0.97	0.96	0.98	55.9	92.7	93.0
Anatomy and physiology of the lymphatic system as related to tests/measures	964	267	989	2.97	2.97	3.19	1.01	0.95	1.02	64.1	93.4	93.2
Movement analysis as related to the lymphatic system (e.g., compensatory movement, extremity range of motion)	968	267	989	3.20	3.15	3.38	1.05	1.08	1.03	71.8	92.0	93.5
Foundations for Evaluation, Differential Diagnosis and Prognosis												
Differential diagnoses related to diseases/conditions of the lymphatic system	966	267	989	3.13	3.12	3.35	1.05	1.01	1.00	68.2	94.2	93.9
Lymphatic system diseases/conditions and their pathophysiology to establish and carry out plan of care, including prognosis	967	267	989	3.12	3.06	3.30	1.02	0.97	0.98	67.9	93.8	94.1
Non-pharmacological medical management of the lymphatic system (e.g., diagnostic imaging, laboratory test values, other medical tests, surgical procedures)	957	267	989	2.77	2.82	3.06	0.94	0.97	0.99	55.0	90.9	92.2
Interventions												
Lymphatic system physical therapy interventions and their applications for rehabilitation, health promotion, and performance according to current best evidence	967	267	989	3.12	3.25	3.41	1.02	1.08	1.02	67.9	93.4	93.9
Anatomy and physiology of the lymphatic system as related to interventions, daily activities, and environmental factors	967	267	989	3.33	3.29	3.46	1.05	1.04	1.00	74.9	94.2	93.8
Adverse effects or complications on the lymphatic system from physical therapy interventions	968	267	989	3.68	3.48	3.71	1.09	1.11	1.00	83.2	93.4	94.8

PT KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Adverse effects or complications on the lymphatic system from physical therapy interventions used on other systems	926	262	974	3.78	3.90	4.09	1.05	1.07	1.00	86.5	94.2	93.6
MUSCULOSKELETAL SYSTEM												
Physical Therapy Examination												
Musculoskeletal system tests/measures, including outcome measures, and their applications according to current best evidence	1,036	290	1,036	4.70	4.74	4.76	0.56	0.51	0.52	99.3	100.0	99.9
Anatomy and physiology of the musculoskeletal system as related to tests/measures	1,036	290	1,036	4.75	4.68	4.74	0.51	0.56	0.54	99.6	100.0	99.8
Movement analysis as related to the musculoskeletal system	1,036	290	1,036	4.60	4.66	4.70	0.61	0.58	0.55	99.5	100.0	100.0
Joint biomechanics and their applications	1,036	290	1,036	4.44	4.46	4.55	0.75	0.74	0.66	97.7	100.0	99.9
Physical therapy ultrasound imaging of the musculoskeletal system	973	290	1,036	2.67	2.69	2.80	1.13	1.05	1.08	48.7	88.3	89.5
Foundations for Evaluation, Differential Diagnosis and Prognosis												
Differential diagnoses related to diseases/conditions of the musculoskeletal system	1,036	274	1,006	4.44	4.57	4.58	0.73	0.62	0.61	98.6	94.5	97.1
Differential diagnoses related to diseases/conditions of the connective tissue	1,036	274	1,006	4.26	4.34	4.34	0.82	0.72	0.74	97.4	94.5	97.1
Musculoskeletal system diseases/conditions and their pathophysiology to establish and carry out plan of care, including prognosis	1,036	274	1,006	4.51	4.55	4.54	0.67	0.60	0.64	99.3	94.5	97.1
Connective tissue diseases/conditions and their pathophysiology to establish and carry out plan of care, including prognosis	1,036	274	1,006	4.27	4.32	4.31	0.80	0.73	0.77	97.3	94.5	97.1
Non-pharmacological medical management of the musculoskeletal system (e.g., diagnostic imaging, laboratory test values, other medical tests, surgical procedures)	1,033	274	1,006	3.64	3.81	3.80	0.93	0.82	0.87	89.2	94.5	96.7
The impact of pharmacology used to treat the musculoskeletal system on physical therapy management	1,010	274	1,006	3.18	3.27	3.72	0.87	0.86	0.86	78.4	93.8	96.6
The impact of regenerative medicine (e.g., platelet rich plasma, stem cells) on physical therapy	996	274	1,006	2.72	2.93	3.20	0.91	0.93	0.96	57.5	89.3	94.6

PT KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
prognosis and interventions related to musculoskeletal diseases/conditions												
Interventions												
Musculoskeletal system physical therapy interventions and their applications for rehabilitation, health promotion, and performance according to current best evidence	1,010	290	1,036	4.54	4.75	4.67	0.69	0.49	0.59	98.7	100.0	100.0
Anatomy and physiology of the musculoskeletal system as related to physical therapy interventions, daily activities, and environmental factors	1,010	290	1,036	4.71	4.77	4.73	0.51	0.46	0.52	99.9	100.0	99.9
Adverse effects or complications on the musculoskeletal system from physical therapy interventions	1,010	290	1,036	4.66	4.73	4.73	0.58	0.52	0.53	99.5	100.0	100.0
Adverse effects or complications on the musculoskeletal system from physical therapy interventions used on other systems	928	262	974	4.48	4.79	4.78	0.71	0.46	0.45	98.7	95.6	94.4
NEUROMUSCULAR & NERVOUS SYSTEM												
Physical Therapy Examination												
Neuromuscular and nervous systems tests/measures, including outcome measures, and their applications according to current best evidence	953	268	977	4.49	4.62	4.58	0.70	0.63	0.66	98.8	92.4	94.1
Anatomy and physiology of the neuromuscular and nervous systems as related to tests/measures	953	268	977	4.53	4.58	4.57	0.67	0.65	0.65	99.1	92.4	94.3
Movement analysis as related to the neuromuscular and nervous systems	952	268	977	4.38	4.58	4.56	0.80	0.65	0.67	96.9	92.4	94.3
Diagnostic electromyography (EMG) using surface electrodes	879	268	977	2.43	2.49	2.62	0.99	1.01	0.99	39.1	77.2	83.7
Diagnostic electrophysiology (EMG/NCV) using needle insertion	839	268	977	2.27	2.35	2.47	1.02	1.00	1.02	31.4	71.7	78.8
Foundations for Evaluation, Differential Diagnosis and Prognosis												
Differential diagnoses related to diseases/conditions of the nervous system (CNS, PNS, ANS)	951	268	977	4.16	4.25	4.25	0.88	0.89	0.82	95.8	92.1	94.2
Nervous system (CNS, PNS, ANS) diseases/conditions and their pathophysiology to establish and carry out plan of care, including prognosis	952	268	977	4.31	4.38	4.39	0.80	0.78	0.76	97.7	92.1	94.3

PT KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Non-pharmacological medical management of the neuromuscular and nervous systems (e.g., diagnostic imaging, laboratory test values, other medical tests, surgical procedures)	947	268	977	3.55	3.65	3.71	0.96	0.90	0.89	86.5	92.4	93.7
The impact of pharmacology used to treat the neuromuscular and nervous systems on physical therapy management	947	268	977	3.22	3.24	3.75	0.98	0.93	0.92	75.8	91.0	93.7
Interventions												
Neuromuscular and nervous systems physical therapy interventions and their applications for rehabilitation, health promotion, and performance according to current best evidence	953	264	955	4.48	4.65	4.59	0.74	0.60	0.64	98.1	91.0	92.1
Anatomy and physiology of the neuromuscular and nervous systems as related to physical therapy interventions, daily activities, and environmental factors	928	264	955	4.58	4.59	4.59	0.63	0.58	0.64	99.4	91.0	92.2
Adverse effects or complications on the neuromuscular and nervous systems from physical therapy interventions	928	264	955	4.53	4.59	4.57	0.67	0.62	0.65	98.8	91.0	92.2
Adverse effects or complications on the neuromuscular and nervous systems from physical therapy interventions used on other systems	928	262	974	4.46	4.77	4.78	0.71	0.49	0.46	98.6	95.6	94.4
Motor control as related to neuromuscular and nervous systems physical therapy interventions	928	264	955	4.42	4.54	4.54	0.75	0.64	0.66	98.6	91.0	92.2
Motor learning as related to the neuromuscular and nervous systems physical therapy interventions	928	264	955	4.41	4.56	4.52	0.75	0.61	0.69	98.6	91.0	92.1
INTEGUMENTARY SYSTEM												
Physical Therapy Examination												
Integumentary system tests/measures, including outcome measures, and their applications according to current best evidence	947	257	943	3.33	3.32	3.51	0.99	0.96	0.98	78.5	93.1	90.0
Anatomy and physiology of the integumentary system as related to tests/measures	948	257	943	3.41	3.41	3.60	1.00	0.96	0.97	80.0	92.7	90.6
Movement analysis as related to the integumentary system (e.g., friction, shear, pressure, and scar mobility)	951	257	943	3.75	3.82	3.97	0.97	0.94	0.89	89.1	93.1	90.9

PT KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Foundations for Evaluation, Differential Diagnosis and Prognosis												
Differential diagnoses related to diseases/conditions of the integumentary system	951	257	943	3.39	3.43	3.64	1.03	0.99	0.93	78.7	92.0	90.6
Integumentary system diseases/conditions and their pathophysiology to establish and carry out plan of care, including prognosis	951	257	943	3.42	3.37	3.67	1.01	0.98	0.93	80.4	92.3	90.5
Non-pharmacological medical management of the integumentary system (e.g., diagnostic imaging, laboratory test values, other medical tests, surgical procedures)	946	257	943	3.02	3.02	3.37	0.98	0.97	0.99	67.2	90.5	89.8
The impact of pharmacology used to treat the integumentary system on physical therapy management	945	257	943	2.82	2.79	3.43	0.98	0.97	0.99	58.0	89.1	89.8
Interventions												
Integumentary system physical therapy interventions and their applications for rehabilitation, health promotion, and performance according to current best evidence	951	257	943	3.64	3.62	3.76	1.02	1.01	0.96	85.5	93.1	90.6
Anatomy and physiology of the integumentary system as related to physical therapy interventions, daily activities, and environmental factors	950	257	943	3.71	3.73	3.83	1.00	0.95	0.94	87.6	93.4	90.9
Adverse effects or complications on the integumentary system from physical therapy and medical/surgical interventions	951	257	943	3.89	3.88	4.01	1.00	0.99	0.91	89.7	93.8	90.8
Adverse effects or complications on the integumentary system from physical therapy interventions used on other systems	927	262	974	3.97	4.10	4.30	0.99	0.96	0.84	90.1	95.6	94.2
METABOLIC & ENDOCRINE SYSTEMS												
Foundations for Evaluation, Differential Diagnosis and Prognosis												
Differential diagnoses related to diseases/conditions of the metabolic and endocrine systems	902	261	938	3.37	3.53	3.61	0.99	0.93	0.96	81.0	89.0	89.4
Metabolic and endocrine system diseases/conditions and their pathophysiology to establish and carry out plan of care, including prognosis	902	261	938	3.41	3.58	3.65	0.98	0.94	0.95	83.2	89.3	89.7

PT KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Non-pharmacological medical management of the metabolic and endocrine systems (e.g., diagnostic imaging, laboratory test values, other medical tests, surgical procedures)	894	261	938	2.98	3.16	3.28	1.00	0.94	0.98	66.3	86.9	88.1
The impact of pharmacology used to treat the metabolic and endocrine systems on physical therapy management	891	261	938	2.85	2.90	3.38	0.97	0.93	0.97	62.4	84.8	88.7
Interventions												
Metabolic and endocrine systems physical therapy interventions and their applications for rehabilitation, health promotion, and performance according to current best evidence	899	261	938	3.57	3.67	3.63	1.05	1.00	1.01	83.3	89.3	89.3
Anatomy and physiology of the metabolic and endocrine systems as related to physical therapy interventions, daily activities, and environmental factors	901	261	938	3.60	3.64	3.62	1.04	1.05	0.99	83.7	88.3	89.2
Adverse effects or complications on the metabolic and endocrine systems from physical therapy interventions	900	261	938	3.85	3.85	3.81	1.00	0.98	0.98	89.1	89.3	89.6
Adverse effects or complications on the metabolic and endocrine systems from physical therapy interventions used on other systems	927	262	974	3.80	3.87	4.08	1.05	1.05	0.97	87.2	95.3	93.9
GASTROINTESTINAL SYSTEM												
Physical Therapy Examination												
Gastrointestinal system tests/measures, including outcome measures, and their applications according to current best evidence (e.g., bowel dysfunction impact questionnaires, Murphy test, Rovsing test, McBurney point sign)	856	258	926	2.69	2.83	2.99	1.02	1.00	1.03	52.5	82.8	84.2
Anatomy and physiology of the gastrointestinal system as related to tests/measures	865	258	926	2.88	2.94	3.09	1.02	1.03	1.03	61.0	83.1	85.2
Movement analysis as related to the gastrointestinal system (e.g., effects of muscular tension or trigger points, positioning for bowel movement)	866	258	926	2.96	2.96	3.10	1.10	1.11	1.04	61.2	81.7	84.7

PT KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Foundations for Evaluation, Differential Diagnosis and Prognosis												
Gastrointestinal system diseases/conditions and their pathophysiology to establish and carry out plan of care, including prognosis	869	258	926	2.96	2.99	3.12	1.03	1.02	1.03	63.8	84.1	85.4
Differential diagnoses related to diseases/conditions of the gastrointestinal system	871	258	926	3.03	3.09	3.19	1.08	1.03	1.05	63.8	84.5	85.3
Non-pharmacological medical management of the gastrointestinal system (e.g., diagnostic imaging, laboratory test values, other medical tests, surgical procedures)	861	258	926	2.64	2.71	2.89	0.96	0.98	0.97	50.4	81.4	84.5
The impact of pharmacology used to treat the gastrointestinal system on physical therapy management	854	258	926	2.49	2.57	3.06	0.91	0.93	1.00	43.6	80.0	85.3
Interventions												
Gastrointestinal system physical therapy interventions and their applications for rehabilitation, health promotion, and performance according to current best evidence (e.g., positioning for reflux prevention, bowel programs)	867	258	926	3.09	3.09	3.18	1.12	1.09	1.05	66.4	84.5	84.9
Anatomy and physiology of the gastrointestinal system as related to physical therapy interventions, daily activities, and environmental factors	872	258	926	3.26	3.23	3.28	1.10	1.08	1.06	72.9	85.2	85.9
Adverse effects or complications on the gastrointestinal system from physical therapy interventions	872	258	926	3.43	3.38	3.46	1.12	1.09	1.11	76.2	85.9	86.3
Adverse effects or complications on the gastrointestinal system from physical therapy interventions used on other systems	926	262	974	3.61	3.73	3.94	1.12	1.12	1.06	80.4	94.5	93.1
GENITOURINARY SYSTEM												
Physical Therapy Examination												
Genitourinary system tests/measures, including outcome measures, and their applications according to current best evidence	844	255	917	2.77	2.93	3.01	1.04	1.09	1.05	54.0	80.3	83.3
Anatomy and physiology of the genitourinary system as related to tests/measures	851	255	917	2.88	2.95	3.07	1.07	1.11	1.07	57.1	80.7	83.6

PT KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Physical therapy ultrasound imaging of the genitourinary system	780	255	917	2.22	2.25	2.44	0.98	1.01	1.02	30.3	66.2	71.5
Foundations for Evaluation, Differential Diagnosis and Prognosis												
Genitourinary system diseases/conditions and their pathophysiology to establish and carry out plan of care, including prognosis	846	255	917	2.80	2.90	3.00	1.09	1.09	1.05	53.7	80.3	82.9
Differential diagnoses related to diseases/conditions of the genitourinary system	855	255	917	2.90	3.02	3.07	1.10	1.11	1.08	57.9	81.4	82.9
Non-pharmacological medical management of the genitourinary system (e.g., diagnostic imaging, laboratory test values, other medical tests, surgical procedures)	844	255	917	2.54	2.64	2.80	1.00	1.04	1.00	44.4	76.6	81.2
The impact of pharmacology used to treat the genitourinary system on physical therapy management	835	255	917	2.42	2.49	2.95	0.95	1.00	1.04	39.7	73.8	82.3
Interventions												
Genitourinary system physical therapy interventions and their applications for rehabilitation, health promotion, and performance according to current best evidence (e.g., bladder programs, biofeedback, pelvic floor retraining)	855	255	917	3.03	3.13	3.15	1.12	1.16	1.08	62.8	81.4	83.6
Anatomy and physiology of the genitourinary system as related to physical therapy interventions, daily activities, and environmental factors	855	255	917	3.17	3.24	3.22	1.14	1.17	1.10	67.8	81.7	84.0
Adverse effects or complications on the genitourinary system from physical therapy interventions	853	255	917	3.29	3.28	3.33	1.17	1.19	1.14	70.6	82.1	84.5
Adverse effects or complications on the genitourinary system from physical therapy interventions used on other systems	927	262	974	3.56	3.63	3.90	1.17	1.17	1.11	77.8	93.8	92.7
SYSTEM INTERACTIONS												
Foundations for Evaluation, Differential Diagnosis and Prognosis												
Differential diagnoses related to diseases/conditions where the primary impact is on more than one system	928	253	917	4.03	4.22	4.33	0.93	0.81	0.70	93.8	92.3	88.8
Diseases/conditions where the primary impact is on more than one system (e.g., cancer, multi-trauma,	927	253	917	4.10	4.22	4.33	0.87	0.81	0.72	95.0	92.3	88.8

PT KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
sarcoidosis, autoimmune disorders, pregnancy) to establish and carry out plan of care, including prognosis												
The impact of co-morbidities/co-existing conditions on patient/client management (e.g., diabetes and hypertension; obesity and arthritis; dementia and hip fracture)	915	253	917	4.43	4.43	4.52	0.71	0.71	0.65	99.1	92.3	88.7
Psychological and psychiatric conditions that impact patient/client management (e.g., grief, depression, schizophrenia)	915	253	917	3.97	4.00	4.16	0.88	0.88	0.80	94.9	92.0	88.7
Dimensions of pain that impact patient/client management (e.g., psychological, social, physiological, neurological, mechanical)	915	253	917	4.26	4.26	4.38	0.79	0.81	0.72	97.4	92.3	88.8
Non-pharmacological medical management of multiple systems (e.g., diagnostic imaging and other medical tests, surgical procedures)	914	253	917	3.66	3.85	4.04	0.92	0.91	0.84	89.5	92.3	88.8
The impact of pharmacology used to treat multiple systems, including polypharmacy, on physical therapy management	913	253	917	3.42	3.53	3.99	0.98	0.98	0.88	82.1	92.0	88.6
EQUIPMENT, DEVICES, & TECHNOLOGIES												
<i>Applications and adjustments, indications, contraindications, and precautions of:</i>												
- assistive and adaptive devices/technologies (e.g., walkers, wheelchairs, adaptive seating systems and positioning devices, mechanical lifts)	876	254	913	4.59	4.60	4.64	0.69	0.65	0.67	98.7	87.6	88.0
- prosthetic devices/technologies (e.g., lower-extremity and upper-extremity prostheses, microprocessor-controlled prosthetic devices)	874	254	913	4.01	3.98	4.14	1.04	0.94	0.92	90.4	87.2	87.8
- protective, supportive, and orthotic devices/technologies (e.g., braces, helmets, taping, compression garments, serial casts, shoe inserts, splints)	875	254	913	4.14	4.06	4.25	0.94	0.94	0.88	93.8	86.9	88.0

PT KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
THERAPEUTIC MODALITIES												
<i>Applications, indications, contraindications, and precautions of:</i>												
- thermal modalities	902	252	912	4.15	3.71	3.81	0.99	1.19	1.11	91.0	88.0	86.2
- iontophoresis	889	252	912	3.73	3.00	3.15	1.19	1.18	1.20	80.2	82.5	80.6
- electrotherapy modalities, excluding iontophoresis (e.g., neuromuscular electrical stimulation (NMES), transcutaneous electrical nerve stimulation (TENS), functional electrical stimulation (FES), interferential therapy, high-voltage pulsed current)	899	252	912	4.14	3.82	3.92	0.97	1.06	1.03	92.5	90.9	87.3
- light modalities (e.g., laser light therapy, LED light therapy)	875	252	912	3.44	2.72	2.92	1.29	1.26	1.22	70.0	75.5	77.2
- phonophoresis	875	252	912	3.45	2.65	2.82	1.31	1.24	1.23	69.8	73.0	74.7
- ultrasound modalities, excluding phonophoresis	888	252	912	3.83	3.17	3.33	1.17	1.30	1.29	81.9	82.5	80.1
- mechanical modalities (e.g., mechanical motion devices, traction devices)	896	252	909	3.97	3.62	3.77	1.06	1.12	1.08	88.2	89.1	85.6
- biofeedback	896	252	909	3.57	3.42	3.50	1.12	1.03	1.09	79.7	88.7	85.3
- diathermy	828	252	909	3.06	2.21	2.55	1.40	1.23	1.31	54.4	56.9	64.3
- intermittent compression	893	252	909	3.57	2.86	3.13	1.16	1.16	1.16	78.4	80.3	80.8
- shockwave therapy	740	252	909	2.45	2.09	2.40	1.26	1.09	1.21	33.0	58.0	63.3
SAFETY & PROTECTION												
Factors influencing safety and injury prevention (e.g., safe patient handling, fall prevention, equipment maintenance, environmental safety)	874	254	913	4.79	4.76	4.77	0.51	0.53	0.55	99.2	87.6	88.0
The function and implications and related precautions of intravenous lines, tubes, catheters, monitoring devices, and mechanical ventilators/oxygen delivery devices	872	254	913	4.29	4.34	4.33	0.88	0.88	0.86	95.9	87.2	87.7
Emergency preparedness (e.g., CPR, first aid, disaster response)	873	254	913	4.52	4.56	4.58	0.78	0.76	0.73	97.0	87.6	87.9
Infection control procedures (e.g., standard/universal precautions, isolation techniques, sterile technique)	874	254	913	4.69	4.63	4.66	0.62	0.72	0.66	98.6	87.6	87.9
Signs/symptoms of physical, sexual, and psychological abuse and neglect	874	254	913	4.38	4.50	4.51	0.81	0.74	0.75	97.1	87.6	87.9

PT KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
PROFESSIONAL RESPONSIBILITIES												
Standards of documentation	873	253	909	4.68	4.70	4.68	0.55	0.54	0.58	99.7	87.2	87.7
Standards of professional ethics	873	253	909	4.80	4.84	4.82	0.46	0.43	0.45	99.8	87.2	87.7
Standards of billing, coding, and reimbursement	872	253	909	4.27	4.53	4.41	0.87	0.69	0.77	95.8	87.2	87.5
Patient/client rights (e.g., ADA, IDEA, HIPAA, patient bill of rights)	873	253	909	4.57	4.68	4.68	0.67	0.61	0.61	98.5	87.2	87.7
Obligations for reporting illegal, unethical, or unprofessional behaviors (e.g., fraud, abuse, neglect)	873	253	909	4.61	4.70	4.69	0.63	0.59	0.60	98.7	87.2	87.7
State and federal laws, rules, regulations, and industry standards set by state and accrediting bodies (e.g., state licensing entities, Joint Commission, CARF, CMS)	872	253	909	4.43	4.61	4.61	0.79	0.70	0.68	97.0	86.9	87.6
Risk management and quality assurance (e.g., policies and procedures, incident reports, peer chart review)	871	252	904	4.07	4.02	3.92	0.95	0.87	0.91	92.3	86.9	86.9
Human resource legal issues (e.g., OSHA, sexual harassment)	872	252	904	3.96	3.99	3.93	0.99	0.93	0.94	91.3	86.6	87.1
Roles and responsibilities of the PT, PTA, other healthcare professionals, and support staff	873	252	904	4.55	4.58	4.56	0.66	0.67	0.68	99.0	86.9	87.2
Cultural factors and/or characteristics that affect patient/client management (e.g., language differences, disability, ethnicity, customs, demographics, religion)	873	252	904	4.23	4.25	4.24	0.86	0.86	0.88	95.8	86.9	86.7
Socioeconomic factors that affect patient/client management	872	252	904	3.93	4.19	4.17	0.90	0.87	0.89	93.5	86.9	86.9
Health information technology (e.g., electronic medical records, telemedicine)	872	252	904	3.88	4.05	4.03	0.98	0.96	0.94	90.7	86.2	86.5
TEACHING & LEARNING THEORIES												
Teaching and learning theories and techniques	897	251	904	3.70	3.93	3.91	1.05	1.00	0.99	85.3	90.1	86.1
Health behavior change models (e.g., social cognitive theory, health belief model)	896	251	904	3.42	3.55	3.65	1.07	1.11	1.02	78.5	87.6	85.9
Communication methods and techniques (e.g., motivational interviewing, health information brochures/handouts, feedback techniques)	903	251	904	3.86	4.04	4.12	1.02	1.04	0.91	88.6	90.1	87.3

PT KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
RESEARCH & EVIDENCE-BASED PRACTICE												
Techniques for accessing evidence (e.g., peer-reviewed publications, scientific proceedings, guidelines, clinical prediction rules)	902	251	904	3.86	3.98	4.02	1.01	0.97	0.93	89.5	90.5	86.8
Research methodology and interpretation (e.g., qualitative, quantitative, levels of evidence)	901	251	904	3.53	3.71	3.69	1.05	1.02	1.02	82.9	90.1	86.1
Measurement science (e.g., reliability, validity)	902	251	904	3.65	3.74	3.77	1.04	1.00	0.99	85.9	90.1	86.0
Statistics (e.g., t-test, chi-square, correlation coefficient, ANOVA, likelihood ratio, effect size, confidence interval)	882	251	904	2.93	2.88	3.07	1.11	1.04	1.10	61.0	83.2	82.1
Data collection techniques (e.g., surveys, direct observation)	892	251	904	3.18	3.13	3.32	1.08	1.02	1.07	70.5	87.2	84.6
SKILLS												
Active listening - Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times	905	251	903	4.72	4.77	4.80	0.55	0.51	0.48	99.6	91.6	87.5
Speaking - Talking to others to convey information effectively	905	251	903	4.69	4.75	4.77	0.56	0.51	0.49	99.6	91.6	87.5
Reading Comprehension - Understanding written sentences and paragraphs in work related documents	905	251	903	4.51	4.57	4.58	0.73	0.69	0.64	98.6	91.2	87.5
Critical Thinking - Using logic and clinical reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems	905	251	903	4.77	4.80	4.83	0.50	0.48	0.43	99.8	91.2	87.5
Social Perceptiveness - Being aware of others' reactions and understanding why they react as they do	903	251	903	4.57	4.73	4.72	0.68	0.55	0.54	98.9	91.6	87.4
Time Management - Managing one's own time and the time of others	905	251	903	4.58	4.71	4.72	0.67	0.56	0.53	99.2	91.6	87.5
Coordination - Adjusting actions in relation to others' actions	903	249	902	4.48	4.51	4.55	0.74	0.64	0.65	97.9	90.9	87.4
Writing - Communicating effectively in writing as appropriate for the needs of the audience	904	249	902	4.48	4.44	4.49	0.75	0.71	0.71	98.0	90.9	87.2

PT KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Active Learning - Understanding the implications of new information for both current and future problem solving and decision-making	904	249	902	4.55	4.59	4.64	0.70	0.64	0.59	98.2	90.9	87.4
Persuasion - Persuading others to change their minds or behavior	901	249	902	3.89	3.91	4.02	1.01	0.96	0.90	90.1	90.1	86.9
Negotiation - Bringing others together and trying to reconcile differences	900	249	902	3.78	3.98	4.14	1.02	0.96	0.86	88.5	89.8	87.2
Service Orientation - Actively looking for ways to help people	902	249	902	4.08	4.35	4.36	0.93	0.82	0.80	93.5	90.9	87.3

Note. Boldface mean (Red) indicates the mean importance value was less than 2.50. Light red shading indicates the 2019 mean importance value was below 2.50 (Criticality Threshold). Light orange shading indicates the 2019 mean importance value was between 2.50 (including) and 3.00 (excluding).

Table B.4. PTA Knowledge and Skill Requirements Survey Results

PTA KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
CARDIOVASCULAR/PULMONARY SYSTEM												
Physical Therapy Data Collection												
Cardiovascular/pulmonary system tests/measures, including outcome measures, and their applications according to current best evidence	1,123	625	696	3.59	3.91	3.93	1.06	0.97	0.99	81.8	98.7	98.9
Anatomy and physiology of the cardiovascular/pulmonary system as related to tests/measures	1,126	625	696	3.64	3.86	3.91	1.04	0.96	0.98	84.8	99.2	99.4
Movement analysis as related to the cardiovascular/pulmonary system (e.g., rib cage excursion, breathing pattern)	1,127	625	696	3.60	3.71	3.80	1.01	0.97	1.00	84.4	99.5	99.4
Diseases/Conditions that Impact Effective Treatment												
Cardiovascular/pulmonary system diseases/conditions and their pathophysiology to carry out the established plan of care	1,129	625	696	3.84	3.98	4.05	0.94	0.90	0.91	90.7	99.5	99.4
Non-pharmacological medical management of the cardiovascular/pulmonary system (e.g., diagnostic imaging, laboratory test values, other medical tests, surgical procedures)	1,116	625	696	3.02	3.23	3.33	1.03	0.98	1.00	66.3	97.3	98.4
The impact of pharmacology used to treat the cardiovascular/pulmonary system on physical therapy management	1,099	625	696	2.84	3.07	3.52	0.99	0.96	0.98	57.7	96.0	98.9
Interventions												
Cardiovascular/pulmonary system physical therapy interventions and their applications for rehabilitation, health promotion, and performance according to current best evidence	1,127	625	696	4.00	4.13	4.12	0.96	0.91	0.88	91.7	99.7	99.4
Anatomy and physiology of the cardiovascular/pulmonary system as related to physical therapy interventions, daily activities, and environmental factors	1,130	625	696	4.08	4.20	4.15	0.91	0.87	0.86	93.8	99.7	99.9
Adverse effects or complications on the cardiovascular/pulmonary system from physical therapy interventions	1,130	625	696	4.33	4.48	4.41	0.83	0.71	0.74	96.9	99.8	100.0

PTA KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Adverse effects or complications on the cardiovascular/pulmonary system from physical therapy interventions used on other systems	1,044	587	643	4.12	4.39	4.30	0.89	0.78	0.80	95.4	93.9	92.1
LYMPHATIC SYSTEM												
Physical Therapy Data Collection												
Lymphatic system tests/measures, including outcome measures, and their applications according to current best evidence	1,063	604	671	2.79	2.99	3.08	1.05	0.99	0.95	54.9	92.3	93.0
Anatomy and physiology of the lymphatic system as related to tests/measures	1,074	604	671	2.95	3.04	3.17	1.05	0.99	0.98	62.5	93.1	94.0
Movement analysis as related to the lymphatic system (e.g., compensatory movement, extremity range of motion)	1,078	604	671	3.32	3.35	3.44	1.07	1.05	1.04	74.2	93.9	94.0
Diseases/Conditions that Impact Effective Treatment												
Lymphatic system diseases/conditions and their pathophysiology to carry out the established plan of care	1,082	604	671	3.24	3.31	3.39	1.06	1.04	0.99	72.7	93.6	94.0
Non-pharmacological medical management of the lymphatic system (e.g., diagnostic imaging, laboratory test values, other medical tests, surgical procedures)	1,064	604	671	2.70	2.88	2.99	0.98	0.95	0.95	52.7	92.2	92.4
Interventions												
Lymphatic system interventions and their applications for rehabilitation, health promotion, and performance according to current best evidence	1,076	604	671	3.26	3.37	3.41	1.06	1.07	1.01	72.4	93.8	94.4
Anatomy and physiology of the lymphatic system as related to interventions, daily activities, and environmental factors	1,083	604	671	3.36	3.43	3.47	1.08	1.06	1.02	75.1	94.4	94.5
Adverse effects or complications on the lymphatic system from physical therapy interventions	1,086	604	671	3.70	3.77	3.75	1.09	1.10	1.05	82.5	95.0	94.7
Adverse effects or complications on the lymphatic system from physical therapy interventions used on other systems	1,042	587	643	3.72	3.70	3.63	1.06	1.07	1.05	85.2	93.0	90.4

PTA KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
MUSCULOSKELETAL SYSTEM												
<i>Physical Therapy Data Collection</i>												
Musculoskeletal system tests/measures, including outcome measures, and their applications according to current best evidence	1,162	647	662	4.31	4.46	4.45	0.85	0.77	0.79	95.8	99.8	99.7
Anatomy and physiology of the musculoskeletal system as related to tests/measures	1,164	647	662	4.51	4.56	4.56	0.73	0.69	0.67	97.9	100.0	100.0
Movement analysis as related to the musculoskeletal system	1,164	647	662	4.38	4.46	4.52	0.77	0.72	0.68	98.1	100.0	100.0
Joint biomechanics and their applications	1,165	647	662	4.33	4.37	4.46	0.80	0.78	0.71	97.0	99.8	100.0
<i>Diseases/Conditions that Impact Effective Treatment</i>												
Musculoskeletal system diseases/conditions and their pathophysiology to carry out the established plan of care	1,164	625	641	4.26	4.30	4.39	0.81	0.74	0.70	97.0	96.6	96.8
Connective tissue diseases/conditions and their pathophysiology to carry out the established plan of care	1,164	625	641	4.07	4.12	4.23	0.90	0.82	0.76	94.7	96.6	96.7
Non-pharmacological medical management of the musculoskeletal system (e.g., diagnostic imaging, laboratory test values, other medical tests, surgical procedures)	1,156	625	641	3.37	3.55	3.64	1.00	0.96	0.88	80.3	95.7	95.9
The impact of pharmacology used to treat the musculoskeletal system on physical therapy management	1,145	625	641	3.06	3.26	3.63	1.03	0.98	0.90	68.8	94.4	96.1
<i>Interventions</i>												
Musculoskeletal system physical therapy interventions and their applications for rehabilitation, health promotion, and performance according to current best evidence	1,165	647	662	4.49	4.63	4.64	0.72	0.59	0.59	98.5	100.0	100.0
Anatomy and physiology of the musculoskeletal system as related to physical therapy interventions, daily activities, and environmental factors	1,166	647	662	4.63	4.63	4.66	0.62	0.62	0.58	99.1	99.8	100.0
Adverse effects or complications on the musculoskeletal system from physical therapy interventions	1,153	647	662	4.50	4.65	4.67	0.68	0.61	0.60	99.0	100.0	100.0

PTA KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Adverse effects or complications on the musculoskeletal system from physical therapy interventions used on other systems	1,045	587	643	4.38	4.53	4.43	0.77	0.70	0.73	97.8	93.9	92.2
NEUROMUSCULAR & NERVOUS SYSTEM												
<i>Physical Therapy Data Collection</i>												
Neuromuscular and nervous systems tests/measures, including outcome measures, and their applications according to current best evidence	1,076	624	641	3.99	4.06	4.08	0.91	0.89	0.86	93.1	96.1	96.5
Anatomy and physiology of the neuromuscular and nervous systems as related to tests/measures	1,078	624	641	4.09	4.16	4.19	0.88	0.86	0.82	95.1	96.1	96.7
Movement analysis as related to the neuromuscular and nervous systems	1,078	624	640	4.12	4.24	4.31	0.87	0.83	0.77	95.6	96.1	96.7
<i>Diseases/Conditions that Impact Effective Treatment</i>												
Nervous system (CNS, PNS, ANS) diseases/conditions and their pathophysiology to carry out the established plan of care	1,079	625	640	4.00	4.06	4.15	0.91	0.90	0.85	94.2	96.3	96.5
Non-pharmacological medical management of the neuromuscular and nervous systems (e.g., diagnostic imaging, laboratory test values, other medical tests, surgical procedures)	1,074	624	640	3.32	3.51	3.64	1.03	1.01	0.90	77.7	94.9	95.9
The impact of pharmacology used to treat the neuromuscular and nervous systems on physical therapy management	1,061	624	640	3.09	3.25	3.68	1.05	0.99	0.94	67.7	94.0	95.8
<i>Interventions</i>												
Neuromuscular and nervous systems physical therapy interventions and their applications for rehabilitation, health promotion, and performance according to current best evidence	1,078	601	615	4.25	4.40	4.41	0.86	0.74	0.69	95.5	92.7	92.9
Anatomy and physiology of the neuromuscular and nervous systems as related to physical therapy interventions, daily activities, and environmental factors	1,079	601	615	4.34	4.38	4.40	0.79	0.75	0.71	97.4	92.7	92.9
Adverse effects or complications on the neuromuscular and nervous systems from physical therapy interventions	1,079	601	615	4.38	4.44	4.42	0.78	0.74	0.74	97.3	92.7	92.7

PTA KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Adverse effects or complications on the neuromuscular and nervous systems from physical therapy interventions used on other systems	1,045	587	643	4.36	4.53	4.42	0.78	0.70	0.73	97.6	93.9	92.1
Motor control as related to neuromuscular and nervous systems physical therapy interventions	1,079	601	615	4.33	4.34	4.39	0.76	0.76	0.72	98.0	92.7	92.7
Motor learning as related to the neuromuscular and nervous systems physical therapy interventions	1,069	601	615	4.11	4.32	4.37	0.86	0.79	0.74	95.9	92.6	92.7
INTEGUMENTARY SYSTEM												
<i>Physical Therapy Data Collection</i>												
Integumentary system tests/measures, including outcome measures, and their applications according to current best evidence	1,056	569	621	3.22	3.32	3.41	1.06	0.97	0.98	72.3	89.3	87.2
Anatomy and physiology of the integumentary system as related to tests/measures	1,061	569	621	3.35	3.43	3.47	1.03	0.98	0.97	77.2	89.6	87.9
Movement analysis as related to the integumentary system (e.g., friction, shear, pressure, and scar mobility)	1,065	569	621	3.77	3.87	3.89	0.96	0.91	0.89	89.8	90.7	88.9
<i>Diseases/Conditions that Impact Effective Treatment</i>												
Integumentary system diseases/conditions and their pathophysiology to carry out the established plan of care	1,063	569	621	3.58	3.65	3.73	0.98	0.95	0.93	84.9	90.2	88.6
Non-pharmacological medical management of the integumentary system (e.g., diagnostic imaging, laboratory test values, other medical tests, surgical procedures)	1,050	569	621	2.97	3.13	3.24	1.04	0.96	0.96	64.2	89.1	86.6
The impact of pharmacology used to treat the integumentary system on physical therapy management	1,041	569	621	2.77	2.88	3.32	1.06	0.98	0.97	54.8	85.6	87.2
<i>Interventions</i>												
Integumentary system physical therapy interventions and their applications for rehabilitation, health promotion, and performance according to current best evidence	1,065	569	621	3.66	3.72	3.71	1.01	0.95	0.95	86.6	90.6	88.2
Anatomy and physiology of the integumentary system as related to physical therapy interventions, daily activities, and environmental factors	1,066	569	621	3.75	3.80	3.78	1.00	0.94	0.95	88.0	90.4	88.5

PTA KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Adverse effects or complications on the integumentary system from physical therapy and medical/surgical interventions	1,066	569	621	3.88	3.98	3.93	1.00	0.95	0.94	89.4	90.6	88.4
Adverse effects or complications on the integumentary system from physical therapy interventions used on other systems	1,043	587	643	3.95	4.07	4.01	0.97	0.90	0.88	92.1	93.6	92.2
METABOLIC & ENDOCRINE SYSTEMS												
<i>Diseases/Conditions that Impact Effective Treatment</i>												
Metabolic and endocrine system diseases/conditions and their pathophysiology to carry out the established plan of care	1,038	593	607	3.21	3.43	3.53	0.99	0.98	0.94	76.4	89.6	90.5
Non-pharmacological medical management of the metabolic and endocrine systems (e.g., diagnostic imaging, laboratory test values, other medical tests, surgical procedures)	1,029	593	607	2.92	3.15	3.34	0.97	0.98	0.95	64.9	88.7	89.7
The impact of pharmacology used to treat the metabolic and endocrine systems on physical therapy management	1,019	593	607	2.77	2.98	3.34	0.98	0.99	0.96	56.8	87.3	90.0
<i>Interventions</i>												
Metabolic and endocrine systems physical therapy interventions and their applications for rehabilitation, health promotion, and performance according to current best evidence	1,039	593	607	3.40	3.53	3.58	1.06	1.03	0.96	79.6	89.5	90.5
Anatomy and physiology of the metabolic and endocrine systems as related to physical therapy interventions, daily activities, and environmental factors	1,041	593	607	3.42	3.56	3.62	1.06	1.06	0.97	79.3	89.8	90.6
Adverse effects or complications on the metabolic and endocrine systems from physical therapy interventions	1,042	593	607	3.65	3.77	3.75	1.06	1.04	0.99	84.6	90.1	90.8
Adverse effects or complications on the metabolic and endocrine systems from physical therapy interventions used on other systems	1,041	587	643	3.70	3.74	3.71	1.09	1.03	1.00	84.2	92.8	91.5

PTA KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
GASTROINTESTINAL SYSTEM												
<i>Physical Therapy Data Collection</i>												
Gastrointestinal system tests/measures, including outcome measures, and their applications according to current best evidence (e.g., bowel dysfunction impact questionnaires, Murphy test, Rovsing test, McBurney point sign)	980	586	596	2.64	2.77	2.93	1.04	1.05	0.99	49.4	81.1	85.0
Anatomy and physiology of the gastrointestinal system as related to tests/measures	989	586	596	2.77	2.86	3.02	1.06	1.04	0.99	53.6	83.6	86.7
Movement analysis as related to the gastrointestinal system (e.g., effects of muscular tension or trigger points, positioning for bowel movement)	996	586	596	2.93	2.97	3.12	1.04	1.09	1.05	61.1	83.5	86.4
<i>Diseases/Conditions that Impact Effective Treatment</i>												
Gastrointestinal system diseases/conditions and their pathophysiology to carry out the established plan of care	1,000	586	596	2.92	3.02	3.14	1.01	1.08	1.03	63.1	84.2	86.7
Non-pharmacological medical management of the gastrointestinal system (e.g., diagnostic imaging, laboratory test values, other medical tests, surgical procedures)	984	586	596	2.63	2.78	2.92	0.98	1.01	0.99	49.3	83.2	84.4
The impact of pharmacology used to treat the gastrointestinal system on physical therapy management	974	586	596	2.48	2.64	3.03	0.93	0.98	1.01	42.9	80.5	85.0
<i>Interventions</i>												
Gastrointestinal system physical therapy interventions and their applications for rehabilitation, health promotion, and performance according to current best evidence (e.g., positioning for reflux prevention, bowel programs)	1,003	586	596	3.06	3.15	3.16	1.07	1.09	1.06	66.6	85.2	86.1
Anatomy and physiology of the gastrointestinal system as related to physical therapy interventions, daily activities, and environmental factors	1,006	586	596	3.17	3.20	3.26	1.10	1.11	1.05	68.7	85.5	86.9
Adverse effects or complications on the gastrointestinal system from physical therapy interventions	1,008	586	596	3.35	3.37	3.41	1.11	1.14	1.07	74.1	85.8	87.5

PTA KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Adverse effects or complications on the gastrointestinal system from physical therapy interventions used on other systems	1,041	587	643	3.57	3.59	3.58	1.14	1.09	1.04	79.9	92.5	91.4
GENITOURINARY SYSTEM												
<i>Physical Therapy Data Collection</i>												
Genitourinary system tests/measures, including outcome measures, and their applications according to current best evidence	963	579	589	2.57	2.78	2.89	1.00	1.05	1.04	45.2	80.7	82.2
Anatomy and physiology of the genitourinary system as related to tests/measures	971	579	589	2.70	2.82	2.95	1.04	1.04	1.05	50.0	81.8	82.5
<i>Diseases/Conditions that Impact Effective Treatment</i>												
Genitourinary system diseases/conditions and their pathophysiology to carry out the established plan of care	977	579	589	2.74	2.89	2.99	1.03	1.06	1.05	52.0	81.9	83.8
Non-pharmacological medical management of the genitourinary system (e.g., diagnostic imaging, laboratory test values, other medical tests, surgical procedures)	964	579	589	2.52	2.68	2.82	0.97	0.97	1.01	44.3	80.7	81.9
The impact of pharmacology used to treat the genitourinary system on physical therapy management	951	579	589	2.40	2.52	2.91	0.95	0.95	1.04	38.4	77.4	82.3
<i>Interventions</i>												
Genitourinary system physical therapy interventions and their applications for rehabilitation, health promotion, and performance according to current best evidence (e.g., bladder programs, biofeedback, pelvic floor retraining)	978	579	589	2.94	3.05	3.13	1.08	1.09	1.04	59.2	82.8	85.0
Anatomy and physiology of the genitourinary system as related to physical therapy interventions, daily activities, and environmental factors	982	579	589	3.01	3.08	3.15	1.11	1.11	1.07	61.0	82.8	84.9
Adverse effects or complications on the genitourinary system from physical therapy interventions	983	579	589	3.13	3.21	3.24	1.15	1.17	1.11	65.1	83.6	84.7
Adverse effects or complications on the genitourinary system from physical therapy interventions used on other systems	1,040	587	643	3.50	3.49	3.48	1.19	1.15	1.10	76.3	91.4	89.5

PTA KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
SYSTEM INTERACTIONS												
<i>Diseases/Conditions that Impact Effective Treatment</i>												
Diseases/conditions where the primary impact is on more than one system (e.g., cancer, multi-trauma, sarcoidosis, autoimmune disorders, pregnancy) to carry out the established plan of care	1,044	564	607	4.03	4.20	4.13	0.92	0.82	0.85	93.7	90.1	86.9
The impact of co-morbidities/co-existing conditions on patient/client management (e.g., diabetes and hypertension; obesity and arthritis; dementia and hip fracture)	1,045	564	607	4.31	4.46	4.42	0.79	0.66	0.70	97.3	90.2	87.2
Psychological and psychiatric conditions that impact patient/client management (e.g., grief, depression, schizophrenia)	1,041	564	607	3.73	4.06	4.01	0.91	0.85	0.88	89.9	90.1	86.9
Dimensions of pain that impact patient/client management (e.g., psychological, social, physiological, neurological, mechanical)	1,042	564	607	4.00	4.27	4.23	0.87	0.76	0.80	95.3	90.2	87.2
Non-pharmacological medical management of multiple systems (e.g., diagnostic imaging and other medical tests, surgical procedures)	1,031	564	607	3.29	3.57	3.72	1.01	0.95	0.95	77.4	89.0	86.1
The impact of pharmacology used to treat multiple systems, including polypharmacy, on physical therapy management	1,018	564	607	3.06	3.30	3.72	1.00	1.00	0.95	68.9	87.5	86.4
EQUIPMENT, DEVICES, & TECHNOLOGIES												
<i>Applications and adjustments, indications, contraindications, and precautions of:</i>												
- assistive and adaptive devices/technologies (e.g., walkers, wheelchairs, adaptive seating systems and positioning devices, mechanical lifts)	998	575	584	4.64	4.73	4.74	0.63	0.53	0.50	99.3	88.9	88.2
- prosthetic devices/technologies (e.g., lower-extremity and upper-extremity prostheses, microprocessor-controlled prosthetic devices)	994	575	584	4.18	4.17	4.34	0.98	0.90	0.84	92.5	88.4	88.1
- protective, supportive, and orthotic devices/technologies (e.g., braces, helmets, taping, compression garments, serial casts, shoe inserts, splints)	997	575	584	4.20	4.25	4.37	0.93	0.85	0.81	94.3	88.7	87.9

PTA KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
THERAPEUTIC MODALITIES												
<i>Applications, indications, contraindications, and precautions of:</i>												
- thermal modalities	1,037	561	598	4.48	4.15	4.14	0.78	1.03	1.01	96.8	88.5	84.6
- iontophoresis	1,022	561	598	4.01	3.31	3.22	1.15	1.25	1.28	85.1	83.5	77.0
- electrotherapy modalities, excluding iontophoresis (e.g., neuromuscular electrical stimulation (NMES), transcutaneous electrical nerve stimulation (TENS), functional electrical stimulation (FES), interferential therapy, high-voltage pulsed current)	1,033	561	598	4.49	4.15	4.14	0.77	1.02	0.99	96.8	88.3	84.6
- light modalities (e.g., laser light therapy, LED light therapy)	1,015	561	598	3.75	2.98	3.00	1.27	1.24	1.27	77.6	79.0	74.7
- phonophoresis	1,007	561	598	3.76	2.94	2.96	1.28	1.31	1.31	76.7	75.8	72.6
- ultrasound modalities, excluding phonophoresis	1,027	561	598	4.31	3.78	3.82	0.94	1.22	1.21	92.6	85.1	81.2
- mechanical modalities (e.g., mechanical motion devices, traction devices)	1,028	561	598	4.24	3.77	3.78	0.98	1.08	1.16	91.7	88.5	82.3
- biofeedback	1,022	561	598	3.76	3.45	3.32	1.19	1.13	1.19	80.8	86.2	79.5
- diathermy	987	561	598	3.65	2.73	2.82	1.34	1.40	1.39	72.2	67.8	67.0
- intermittent compression	1,028	561	598	3.83	3.26	3.29	1.17	1.14	1.17	83.2	85.0	79.6
SAFETY & PROTECTION												
Factors influencing safety and injury prevention (e.g., safe patient handling, fall prevention, equipment maintenance, environmental safety)	996	575	584	4.78	4.82	4.80	0.50	0.44	0.47	99.5	88.9	88.2
The function and implications and related precautions of intravenous lines, tubes, catheters, monitoring devices, and mechanical ventilators/oxygen delivery devices	995	575	584	4.34	4.37	4.38	0.89	0.85	0.87	94.8	88.6	87.6
Emergency preparedness (e.g., CPR, first aid, disaster response)	996	575	584	4.51	4.57	4.54	0.77	0.72	0.75	97.3	88.7	88.2
Infection control procedures (e.g., standard/universal precautions, isolation techniques, sterile technique)	995	575	584	4.72	4.74	4.69	0.60	0.56	0.63	99.1	88.9	88.1
Signs/symptoms of physical, sexual, and psychological abuse and neglect	995	575	584	4.39	4.47	4.47	0.86	0.75	0.78	95.8	88.9	88.1

PTA KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
PROFESSIONAL RESPONSIBILITIES												
Standards of documentation	994	572	584	4.68	4.74	4.71	0.58	0.57	0.55	99.7	88.3	88.2
Standards of professional ethics	994	572	584	4.79	4.83	4.82	0.47	0.44	0.45	99.9	88.4	88.2
Standards of billing, coding, and reimbursement	993	572	584	4.21	4.37	4.34	0.98	0.90	0.86	92.4	87.9	87.9
Patient/client rights (e.g., ADA, IDEA, HIPAA, patient bill of rights)	994	572	584	4.63	4.72	4.71	0.66	0.58	0.56	98.6	88.4	88.2
Obligations for reporting illegal, unethical, or unprofessional behaviors (e.g., fraud, abuse, neglect)	994	572	584	4.65	4.75	4.72	0.63	0.54	0.57	99.1	88.4	88.2
State and federal laws, rules, regulations, and industry standards set by state and accrediting bodies (e.g., state licensing entities, Joint Commission, CARF, CMS)	994	572	584	4.50	4.60	4.58	0.80	0.71	0.67	96.4	88.4	88.1
Risk management and quality assurance (e.g., policies and procedures, incident reports, peer chart review)	991	572	584	4.14	4.26	4.29	0.98	0.92	0.87	91.9	87.9	88.1
Human resource legal issues (e.g., OSHA, sexual harassment)	990	572	584	4.09	4.20	4.20	0.99	0.93	0.93	91.4	88.1	87.9
Roles and responsibilities of the PT, PTA, other healthcare professionals, and support staff	994	572	584	4.64	4.71	4.71	0.65	0.58	0.56	99.1	88.3	88.2
Cultural factors and/or characteristics that affect patient/client management (e.g., language differences, disability, ethnicity, customs, demographics, religion)	993	571	582	4.26	4.18	4.07	0.89	0.87	0.89	95.1	88.3	87.2
Socioeconomic factors that affect patient/client management	992	571	582	3.79	4.08	3.97	0.97	0.89	0.89	90.0	88.1	87.2
Health information technology (e.g., electronic medical records, telemedicine)	992	571	582	3.86	4.02	4.01	0.99	0.93	0.96	89.7	87.9	87.2
TEACHING & LEARNING THEORIES												
Teaching and learning theories and techniques	987	571	582	3.61	3.87	3.88	1.03	0.97	0.99	84.7	87.9	86.6
Health behavior change models (e.g., social cognitive theory, health belief model)	984	571	582	3.35	3.70	3.75	1.07	1.01	0.99	77.8	86.6	86.3
Communication methods and techniques (e.g., motivational interviewing, health information brochures/handouts, feedback techniques)	989	571	582	3.64	3.93	3.89	1.09	0.98	1.01	84.2	87.8	86.7

PTA KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
RESEARCH & EVIDENCE-BASED PRACTICE												
Techniques for accessing evidence (e.g., peer-reviewed publications, scientific proceedings, guidelines, clinical prediction rules)	1,018	559	596	3.29	3.56	3.55	1.11	1.07	1.02	74.3	87.0	84.2
Research methodology and interpretation (e.g., qualitative, quantitative, levels of evidence)	1,017	559	596	3.07	3.31	3.39	1.07	1.08	1.02	69.2	85.4	83.3
Measurement science (e.g., reliability, validity)	1,021	559	596	3.29	3.45	3.55	1.10	1.10	1.01	75.0	85.4	83.9
Data collection techniques (e.g., surveys, direct observation)	1,021	559	596	3.12	3.28	3.45	1.12	1.10	1.06	69.3	85.4	83.0
SKILLS												
Active listening - Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times	1,032	558	593	4.75	4.84	4.79	0.53	0.42	0.51	99.5	89.3	85.2
Speaking - Talking to others to convey information effectively	1,032	558	593	4.73	4.83	4.77	0.53	0.42	0.49	99.5	89.3	85.2
Reading Comprehension - Understanding written sentences and paragraphs in work related documents	1,032	558	593	4.63	4.73	4.67	0.62	0.53	0.57	99.2	89.3	85.2
Critical Thinking - Using logic and clinical reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems	1,032	558	593	4.70	4.79	4.80	0.56	0.48	0.46	99.8	89.3	85.2
Social Perceptiveness - Being aware of others' reactions and understanding why they react as they do	1,032	558	593	4.60	4.75	4.70	0.66	0.53	0.55	99.2	89.3	85.2
Time Management - Managing one's own time and the time of others	1,032	558	593	4.62	4.76	4.73	0.62	0.50	0.53	99.5	89.3	85.2
Coordination - Adjusting actions in relation to others' actions	1,032	558	592	4.52	4.60	4.54	0.69	0.61	0.67	99.3	89.3	84.9
Writing - Communicating effectively in writing as appropriate for the needs of the audience	1,032	558	592	4.54	4.60	4.54	0.70	0.61	0.66	98.9	89.3	85.1
Active Learning - Understanding the implications of new information for both current and future problem solving and decision-making	1,032	558	592	4.55	4.65	4.56	0.66	0.59	0.65	99.3	89.3	85.1

PTA KSRs	Importance											
	n			M			SD			%Imp		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	2016	2018	2019
Persuasion - Persuading others to change their minds or behavior	1,028	558	592	3.89	3.92	3.90	1.06	0.99	1.01	88.8	88.2	84.2
Negotiation - Bringing others together and trying to reconcile differences	1,022	558	592	3.84	4.06	4.03	1.03	0.93	0.90	88.0	88.6	84.9
Service Orientation - Actively looking for ways to help people	1,029	558	592	4.30	4.45	4.39	0.84	0.76	0.77	96.4	89.3	85.1

Note. Boldface mean (Red) indicates the mean importance value was less than 2.50. Light red shading indicates the 2019 mean importance value was below 2.50 (Criticality Threshold). Light orange shading indicates the 2019 mean importance value was between 2.50 (including) and 3.00 (excluding).

Appendix C. Notable Mean Differences Across Years

Table C.1: Statistics and Formatting Key:

- **Sample Size (n):** Count of respondents that provided usable data
- **Mean Importance (M):** Based on responses for scale points 1 through 5
- **Standard Deviation of Importance (SD):** Based on responses for scale points 1 through 5
- **Mean Difference (M-Diff):** Difference between mean importance ratings across years (Y0=2016, Y1=2018, Y2=2019)

- **Boldface Mean (Red):** Mean importance value was less than 2.50 (Criticality Threshold)
- **Boldface M-Diff (Green):** Mean difference value was greater than 0.50
- **Boldface M-Diff (Red):** Mean difference value was less than -0.50

Table C.1. Notable Mean Differences Across Years

	Importance									M-Diff		
	n			M			SD			M-Diff		
	2016	2018	2019	2016	2018	2019	2016	2018	2019	Y1-0	Y2-1	Y2-0
PT KSRs												
The impact of pharmacology used to treat the cardiovascular/pulmonary system on physical therapy management	1,008	274	1,032	3.10	3.11	3.72	0.97	0.99	0.93	0.01	0.61	0.62
The impact of pharmacology used to treat the musculoskeletal system on physical therapy management	1,010	274	1,006	3.18	3.27	3.72	0.87	0.86	0.86	0.09	0.45	0.54
The impact of pharmacology used to treat the neuromuscular and nervous systems on physical therapy management	947	268	977	3.22	3.24	3.75	0.98	0.93	0.92	0.03	0.51	0.53
The impact of pharmacology used to treat the integumentary system on physical therapy management	945	257	943	2.82	2.79	3.43	0.98	0.97	0.99	-0.03	0.64	0.61
The impact of pharmacology used to treat the metabolic and endocrine systems on physical therapy management	891	261	938	2.85	2.90	3.38	0.97	0.93	0.97	0.06	0.48	0.53
The impact of pharmacology used to treat the gastrointestinal system on physical therapy management	854	258	926	2.49	2.57	3.06	0.91	0.93	1.00	0.09	0.49	0.58
The impact of pharmacology used to treat the genitourinary system on physical therapy management	835	255	917	2.42	2.49	2.95	0.95	1.00	1.04	0.07	0.46	0.53
The impact of pharmacology used to treat multiple systems, including polypharmacy, on physical therapy management	913	253	917	3.42	3.53	3.99	0.98	0.98	0.88	0.11	0.46	0.57
Applications, indications, contraindications, and precautions of: iontophoresis	889	252	912	3.73	3.00	3.15	1.19	1.18	1.20	-0.73	0.15	-0.59
Applications, indications, contraindications, and precautions of: light modalities (e.g., laser light therapy, LED light therapy)	875	252	912	3.44	2.72	2.92	1.29	1.26	1.22	-0.71	0.20	-0.51

	Importance									M-Diff		
	n			M			SD					
	2016	2018	2019	2016	2018	2019	2016	2018	2019	Y1-0	Y2-1	Y2-0
Applications, indications, contraindications, and precautions of: phonophoresis	875	252	912	3.45	2.65	2.82	1.31	1.24	1.23	-0.80	0.17	-0.63
Applications, indications, contraindications, and precautions of: ultrasound modalities, excluding phonophoresis	888	252	912	3.83	3.17	3.33	1.17	1.30	1.29	-0.66	0.16	-0.50
Applications, indications, contraindications, and precautions of: diathermy	828	252	909	3.06	2.21	2.55	1.40	1.23	1.31	-0.85	0.34	-0.51
PT WAs												
Interpret each of the following types of data to determine the need for intervention or the response to intervention: Neuromuscular system	271	431	676	3.98	4.66	4.62	0.86	0.64	0.64	0.68	-0.04	0.64
Perform dry needling	295	491	779	2.27	2.90	2.89	1.18	1.37	1.44	0.62	-0.01	0.61
Perform and/or train patient/client/caregiver in ultrasound procedures	262	456	706	3.08	2.59	2.49	1.17	1.28	1.36	-0.49	-0.10	-0.59
PTA KSRs												
The impact of pharmacology used to treat the cardiovascular/pulmonary system on physical therapy management	1,099	625	696	2.84	3.07	3.52	0.99	0.96	0.98	0.23	0.45	0.68
The impact of pharmacology used to treat the musculoskeletal system on physical therapy management	1,145	625	641	3.06	3.26	3.63	1.03	0.98	0.90	0.19	0.38	0.57
The impact of pharmacology used to treat the neuromuscular and nervous systems on physical therapy management	1,061	624	640	3.09	3.25	3.68	1.05	0.99	0.94	0.16	0.42	0.58
The impact of pharmacology used to treat the integumentary system on physical therapy management	1,041	569	621	2.77	2.88	3.32	1.06	0.98	0.97	0.11	0.44	0.55
The impact of pharmacology used to treat the metabolic and endocrine systems on physical therapy management	1,019	593	607	2.77	2.98	3.34	0.98	0.99	0.96	0.22	0.36	0.58

	Importance									M-Diff		
	n			M			SD					
	2016	2018	2019	2016	2018	2019	2016	2018	2019	Y1-0	Y2-1	Y2-0
The impact of pharmacology used to treat the gastrointestinal system on physical therapy management	974	586	596	2.48	2.64	3.03	0.93	0.98	1.01	0.15	0.39	0.55
The impact of pharmacology used to treat the genitourinary system on physical therapy management	951	579	589	2.40	2.52	2.91	0.95	0.95	1.04	0.12	0.39	0.51
The impact of pharmacology used to treat multiple systems, including polypharmacy, on physical therapy management	1,018	564	607	3.06	3.30	3.72	1.00	1.00	0.95	0.24	0.42	0.66
Applications, indications, contraindications, and precautions of: iontophoresis	1,022	561	598	4.01	3.31	3.22	1.15	1.25	1.28	-0.71	-0.09	-0.79
Applications, indications, contraindications, and precautions of: light modalities (e.g., laser light therapy, LED light therapy)	1,015	561	598	3.75	2.98	3.00	1.27	1.24	1.27	-0.77	0.02	-0.75
Applications, indications, contraindications, and precautions of: phonophoresis	1,007	561	598	3.76	2.94	2.96	1.28	1.31	1.31	-0.82	0.02	-0.80
Applications, indications, contraindications, and precautions of: diathermy	987	561	598	3.65	2.73	2.82	1.34	1.40	1.39	-0.92	0.09	-0.82
Applications, indications, contraindications, and precautions of: intermittent compression	1,028	561	598	3.83	3.26	3.29	1.17	1.14	1.17	-0.57	0.03	-0.54
PTA WAs												
Apply taping for neuromuscular reeducation	176	284	514	3.26	4.10	4.09	1.13	1.04	1.13	0.84	-0.02	0.83
Apply taping for pain management	174	284	514	3.22	4.06	4.10	1.17	1.14	1.04	0.84	0.04	0.89
Educate the healthcare team about safe patient handling (e.g., injury prevention, ergonomics, use of equipment)	181	266	486	4.13	4.46	4.63	0.89	0.85	0.71	0.33	0.17	0.50

Note. Values in green font indicate an increase in mean importance of greater than 0.5. Values in red font indicate a decrease in mean importance of greater than 0.5.