Three Pillars of PT Imaging Advocacy: A Framework to Advance Scope of Practice

Presentation · November 2022

CITATIONS
0

READS
44

1 author:

Lance M. Mabry
High Point University
89 PUBLICATIONS **198** CITATIONS

SEE PROFILE

Three Pillars of PT Imaging Advocacy: A Framework to Advance Scope of Practice

Lance M. Mabry, PT, DPT

Board Certified Orthopaedic Specialist

Fellow of the American Academy of Orthopaedic Manual Physical Therapists

High Point University

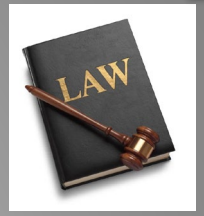
Disclosure

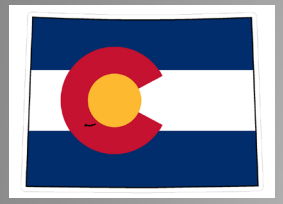
- Lance Mabry receives compensation for teaching continuing education on musculoskeletal imaging

Overview

- State of the States
- Three Pillars Imaging Advocacy Framework
  - Entry-Level Education
  - Continuing Education
  - Routine Practice
- Mabry, et al in JMMT
  - Imaging Skill Utilization
  - By Setting
  - By Degree
  - By Experience
  - By Res/Fellowship
  - By Board Cert
  - By APTA Status

Barrier to Entry: Time, Cost, Risk





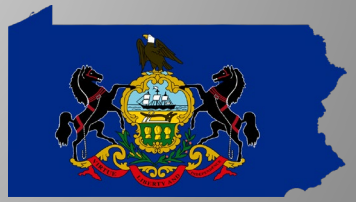
State Board Rule/Policy

State Board Ruling/ Opinion/Decision

Security

HIGH POINT UNIVERSITY

Barrier to Entry: Time, Cost, Risk



Security

X-Ray Only

Modalities Available

All Modalities

SUBCHAPTER 48C - SCOPE OF PHYSICAL THERAPY PRACTICE

SECTION .0100 - PHYSICAL THERAPISTS

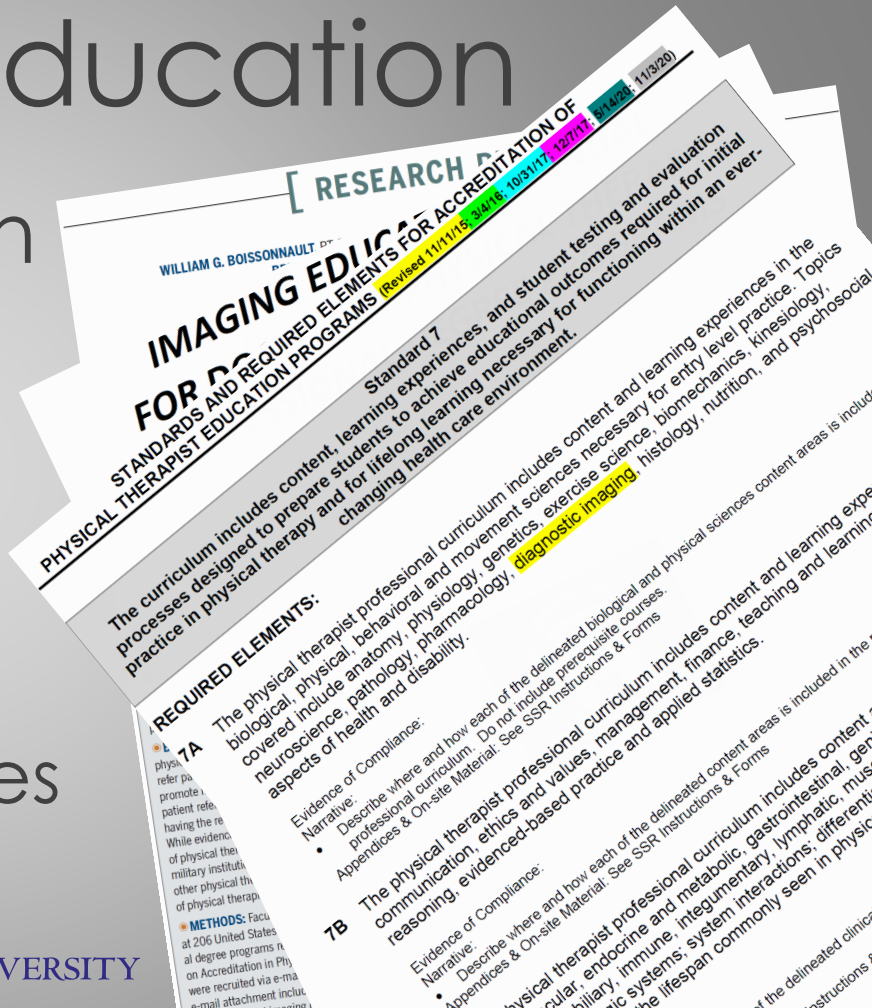
21 NCAC 48C .0101 PERMITTED PRACTICE

(a) Physical therapy is presumed to include any acts, tests, procedures, modalities, treatments, or interventions that are routinely taught in educational programs or in continuing education programs for physical therapists and are routinely performed in practice settings.

HIGH POINT UNIVERSITY

Entry Level Education

- Entry-Level Education
  - 2014: 98% DPT programs teach imaging
  - 2015: Imaging SIG Ed Guidance
  - 2016: CAPTE Guidelines



(Boissonnault, White, Carney, Malin, & Smith, 2014)

High Point University

NPTE

NUMBER OF ITEMS (RANGE)				
BODY SYSTEM	Physical Therapy Examination	Foundations for Evaluation, Differential Diagnosis, & Prognosis	Interventions	TOTAL PER SYSTEM
Cardiovascular & Pulmonary Systems	7-9	8-9	8-10	23-28
Musculoskeletal System	18-21	17-20	16-19	51-60
Neuromuscular & Nervous Systems	15-17	14-16	15-17	44-50
Integumentary System	3-4	3-4	3-4	9-12
Metabolic & Endocrine Systems	–	3-4	2-3	5-7
Gastrointestinal System	0-2	2-3	1-2	3-7
Genitourinary System	1-2	2-3	1-2	4-7
Lymphatic System	0-2	1-3	2-3	3-8
System Interactions	–	8-12	–	8-12
TOTAL ACROSS SYSTEMS	44-57	58-74	48-60	–
NONSYSTEM				TOTAL PER NONSYSTEM
				5-6
				6-8
				5-6
Professional Responsibilities				4-5
Research & Evidence-Based Practice				3-5
TOTAL				200

Foundations for Evaluation, Differential Diagnosis, & Prognosis. This category refers to the

- Nonpharmacological medical management of the cardiovascular & pulmonary systems (e.g., diagnostic imaging, laboratory test values, other medical tests, surgical procedures)

Continuing Education

Table 2. Knowledge and Beliefs Regarding Diagnostic Imaging[a]

Knowledge and Belief Topics	No. Responding	n	%
Source of most education on diagnostic imaging (able to choose up to 3)	694		
No meaningful education		60	8.6
Academic PT program		316	45.5
Academic postgrad		201	29.0
Residency or fellowship		66	9.5
Conferences/cont. ed		221	31.8
Self-study		258	37.2
Clinical mentoring		168	24.2
Estimated hours of imaging during entry-level training (median, IQR)	633	5	2–16
Estimated hours of imaging after entry-level graduation (median, IQR)	657	10	1–32
Are PTs allowed to order imaging in your state?	691		
Yes		70	10.1
No		540	78.2
Do not know		81	11.7

[a]IQR = interquartile range; PT = physical therapy.

(Rundell, Maitland, Manske, & Beneck, 2021)


AMERICAN BOARD OF PHYSICAL THERAPY RESIDENCY AND
Residency Practice
IFOMPT
ABPTRFE
American Board of Physical Therapy
Residency & Fellowship Education
INTERNATIONAL FEDERATION
OF ORTHOPAEDIC MANIPULATIVE
PHYSICAL THERAPISTS (IFOMPT) INC
IFOMPT
The Global Leader in OMPT Excellence
OPL15
A SURVEY OF DIAGNOSTIC IMAGING CURRICULA IN SPORTS PHYSICAL THERAPY RESIDENCY AND FELLOWSHIP PROGRAMS
Dale A. Gerke, Evan Othmer Nelson, Tyler Alan James Amborn, Collin Dean Christensen, Kathleen Orfei
PURPOSE/HYPOTHESIS:
OPL16
A SURVEY OF DIAGNOSTIC IMAGING CURRICULA IN ORTHOPAEDIC PHYSICAL THERAPY RESIDENCY AND FELLOWSHIP PROGRAMS
Dale A. Gerke, Evan Othmer Nelson, Billy Joe Bruggink, Zachary Smith, Emily Claire Goetz, Luke Steven Menges
PURPOSE/HYPOTHESIS: The role of diagnostic imaging in orthopaedic
physical therapy (PT) practice is evolving and little is known about how
residency and fellowship programs meet the broad imaging education
standard. The purpose of this study was to assess instructional methods
for diagnostic and procedural imaging curricula used in orthopaedic PT
residency (OPTR) and fellowship (OPTF) programs.
NUMBER OF SUBJECTS: Responses were obtained from 67 programs (39% R and
yield); 55 (82%) represented OPTR and 12 (18%) represented OPTF. Resi-
Program directors provided 59 responses, and faculty or staff provid-
ed 8.
MATERIALS AND METHODS: A 46-item electronic survey of program de-
mographics, diagnostic and procedural imaging curricula, curricular
outcomes, and imaging scope of practice was distributed to all Unit
ed States OPTR and OPTF programs listed on the American Board
ical Therapy Residency and Fellowship Education directory in
Qualtric (Provo, UT).
wed PTs to directly refer for imagi
PTF programs included diag
in film radiography (X
computed to
High Point University

APTA Learning Center

CATALOG ▾ MY TRAINI

Direct Ordering of Diagn
Imaging by Physical Ther
Updates from the Field

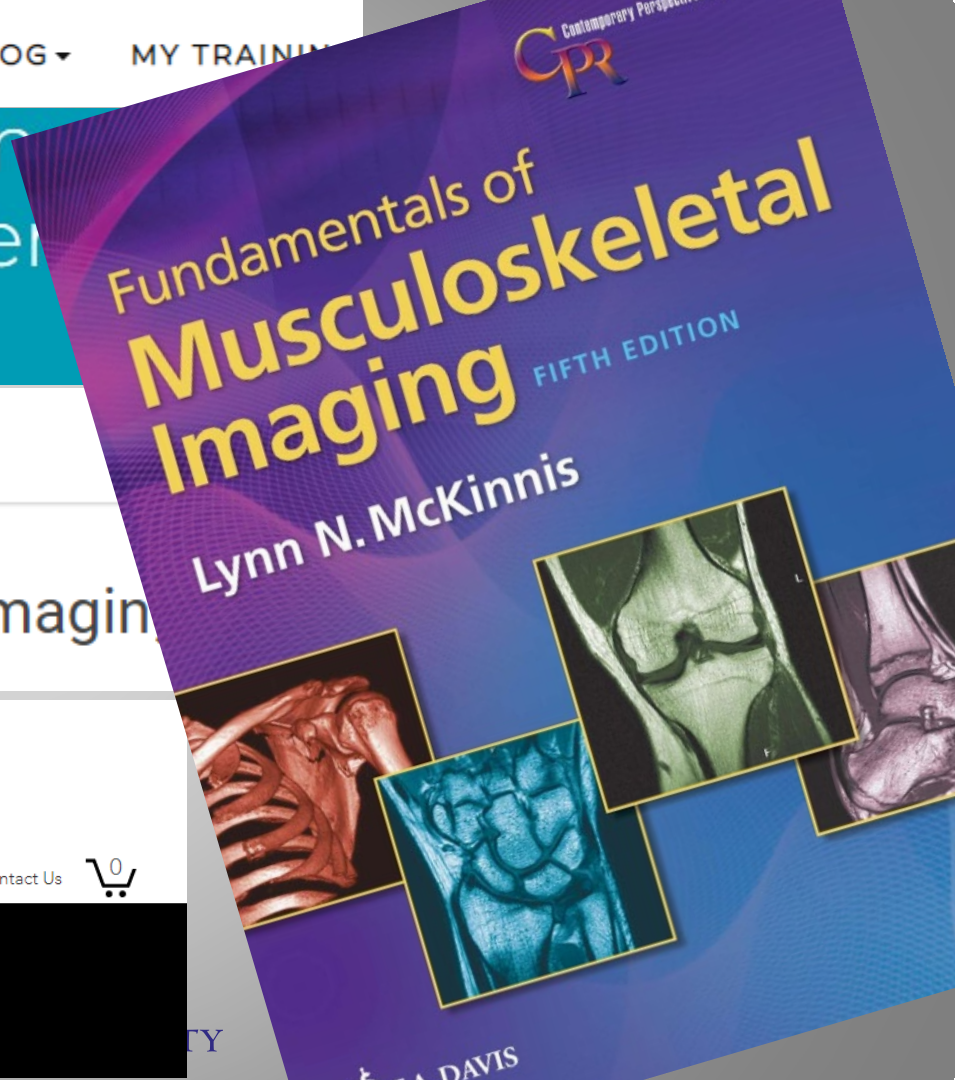
MEDBRIDGE

Indications for Musculoskeletal Imagin
presented by Robert Boyles, PT, DSc, OCS, FAAOMPT

Redefine.
Health Education

Home About Who We Serve Imaging Primary Care Courses Free Resources Contact Us 0

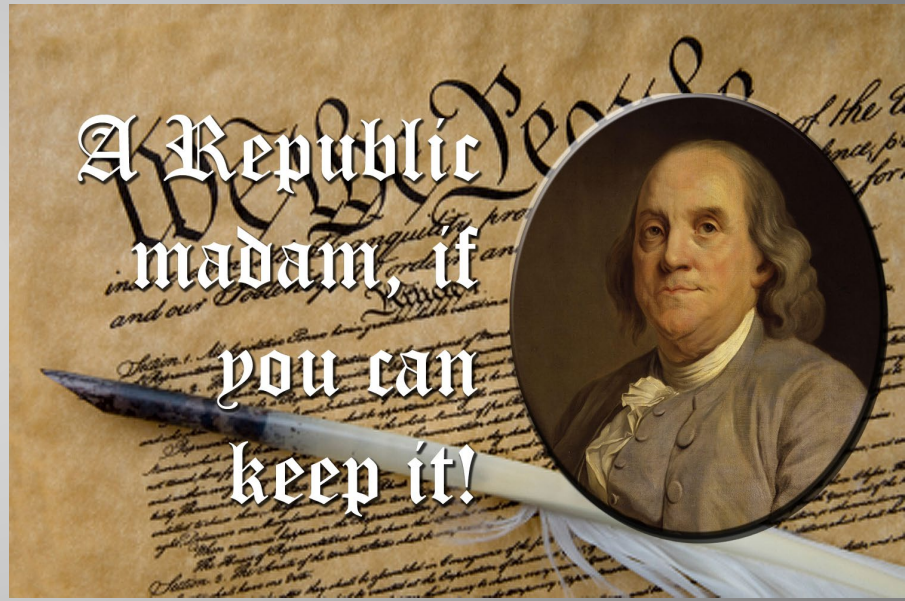
Master MSK Imaging Certification



Routine Practice

- In the military…
- In the states…
- Worldwide…

- But what about <u>my</u> state?



JOURNAL OF MANUAL & MANIPULATIVE THERAPY
https://doi.org/10.1080/10669817.2022.2106729

Taylor & Francis
Taylor & Francis Group

Physical Therapists Are Routinely Performing the Requisite Skills to Directly Refer for Musculoskeletal Imaging: An Observational Study

Lance M. Mabry[a], Richard Severin[b,c], Angela S. Gisselman[d], Michael D. Ross[e], Todd E. Davenport[f], Brian A. Young[c], Aaron P. Keil[b] and Don L. Goss[a]

[a]Department of Physical Therapy, Congdon School of Health Sciences, High Point University, One University Parkway, High Point, NC USA; [b]Department of Physical Therapy, College of Applied Health Sciences, University of Illinois at Chicago, Chicago, IL, USA; [c]Department of Physical Therapy, Robbins College of Health and Human Sciences, Baylor University , Waco, TX, USA; [d]Doctor of Physical Therapy Program, Department of Public Health and Community Medicine, School of Medicine, Tufts University, Phoenix, AZ, USA; [e]Department of Physical Therapy, Daemen University, Amherst, NY, USA; [f]Department of Physical Therapy, School of Health Sciences, University of the Pacific, Stockton, CA, USA

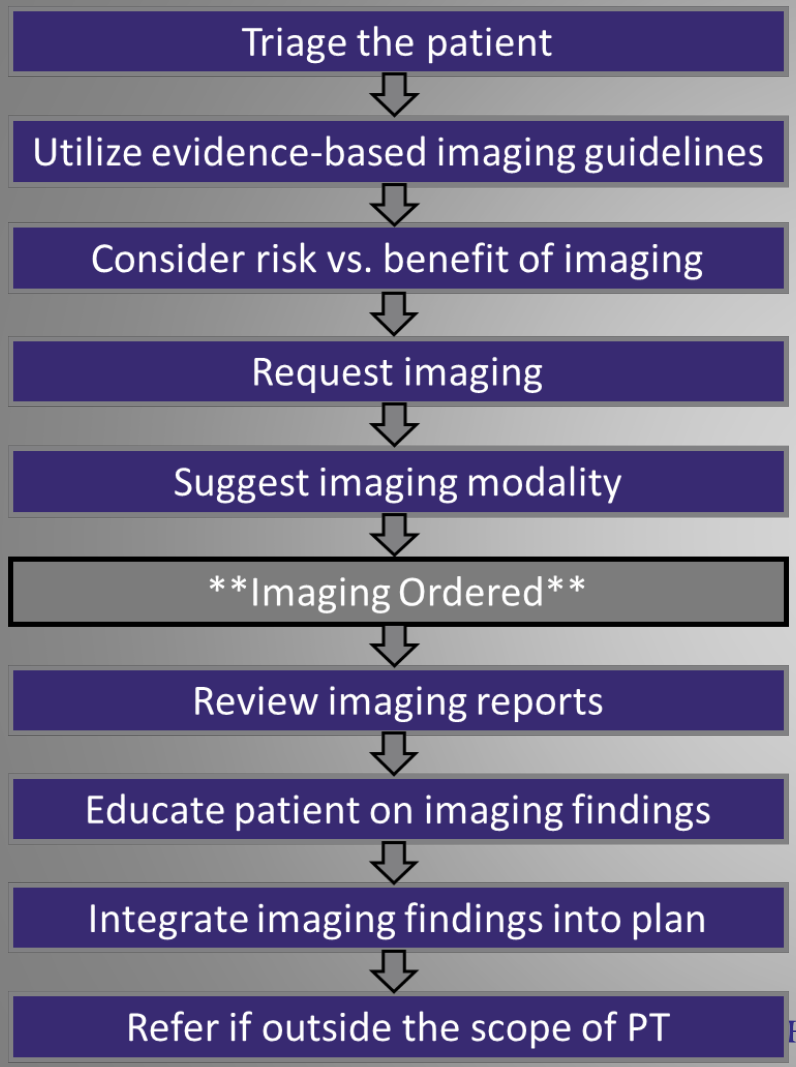
ABSTRACT

Objectives: To explore if physical therapists are practicing skills necessary to refer patients for musculoskeletal imaging.

Methods: An expert panel established a list of nine requisite skills to refer for musculoskeletal imaging. A blinded expert panel validated the list using a 5-point Likert scale. The skills list was examined via an electronic survey distributed to United States physical

KEYWORDS

Medical imaging; triage; patient education; certification; nonmedical residency; referral and consultation; educational status



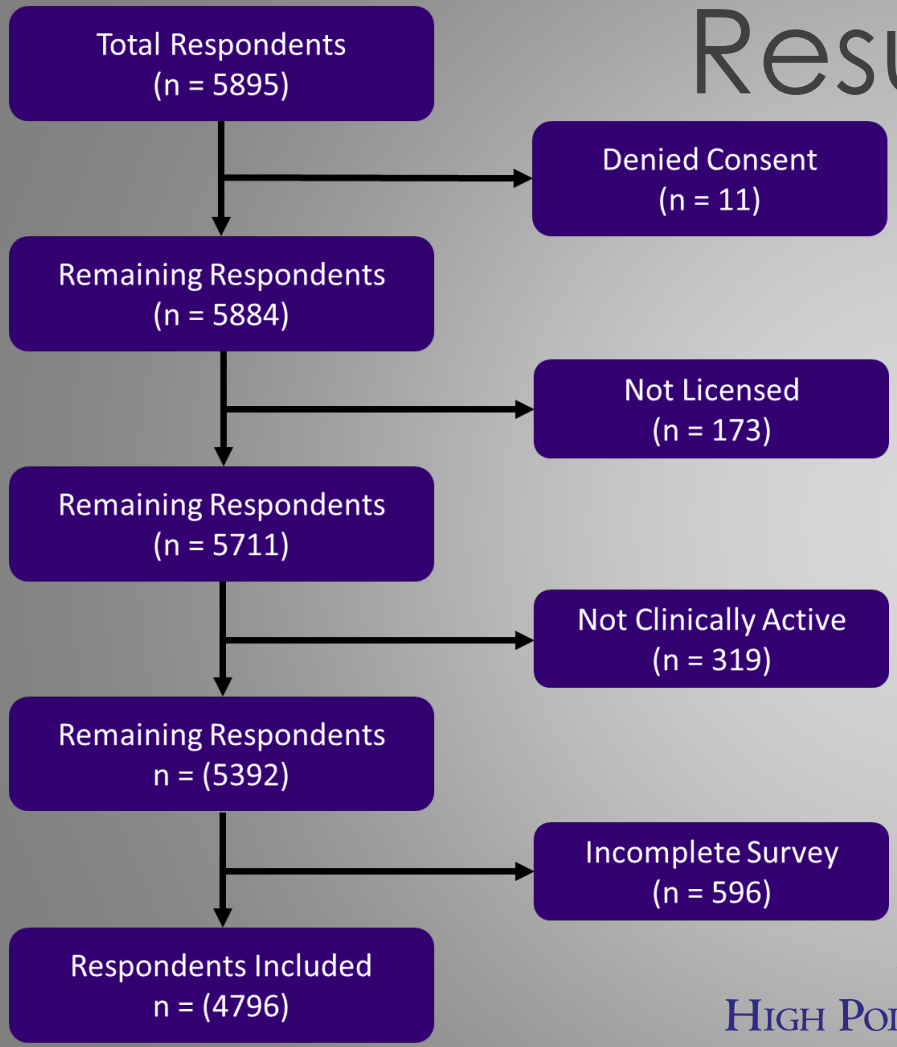
Skill List

- 3 Expert PTs created list
- List validation
  - 3 PTs
  - 1 Ortho Surgeon
  - 1 Radiologist
- Scored on 5-pt Likert Scale
  - A priori of 3/5 score

Methods

- Methods
  - Cross-sectional Observational Study
  - Qualtrics Electronic Survey
  - Distributed by many APTA chapters, sections, and AAOMPT
    - Coalition of the willing

Results



HIGH POINT UNIVERSI

Table 1. Demographics.

Primary Practice Setting	n	%
Acute Care	282	5.88%
Home Health	239	4.98%
Neurology	113	2.36%
Oncology	19	0.40%
Orthopaedics	3005	62.66%
Pediatrics	204	4.25%
Pelvic Health	110	2.29%
Rehab/SNF	236	4.92%
Sports	182	3.79%
Other	406	8.47%
Education	**n**	**%**
BPT	459	9.57%
MPT	583	12.15%
DPT	3754	78.26%
Experience	**n**	**%**
0–5 Years	1451	30.24%
6–10 Years	913	19.03%
11–15 Years	613	12.78%
16–20 Years	408	8.51%
>20 Years	1411	29.51%
Residency/Fellowship Training	**n**	**%**
Yes	911	18.99%
No	3885	80.99%
Board Certification	**n**	**%**
Yes	1669	34.79%
No	3127	65.19%
Other Demographics	**Yes**	**No**
Currently refer directly to a radiologist	301 (6.28%)	4490 (93.72%)
Military/Federal	187 (3.90%)	4609 (96.10%)
APTA Member	3425 (71.39%)	1371 (28.58%)

APTA: American Physical Therapy Association; BPT: Bachelor of Physical Therapy Degree; DPT: Doctorate of Physical Therapy Degree; MPT: Masters of Physical Therapy Degree; SNF: Skilled Nursing Facility

Results

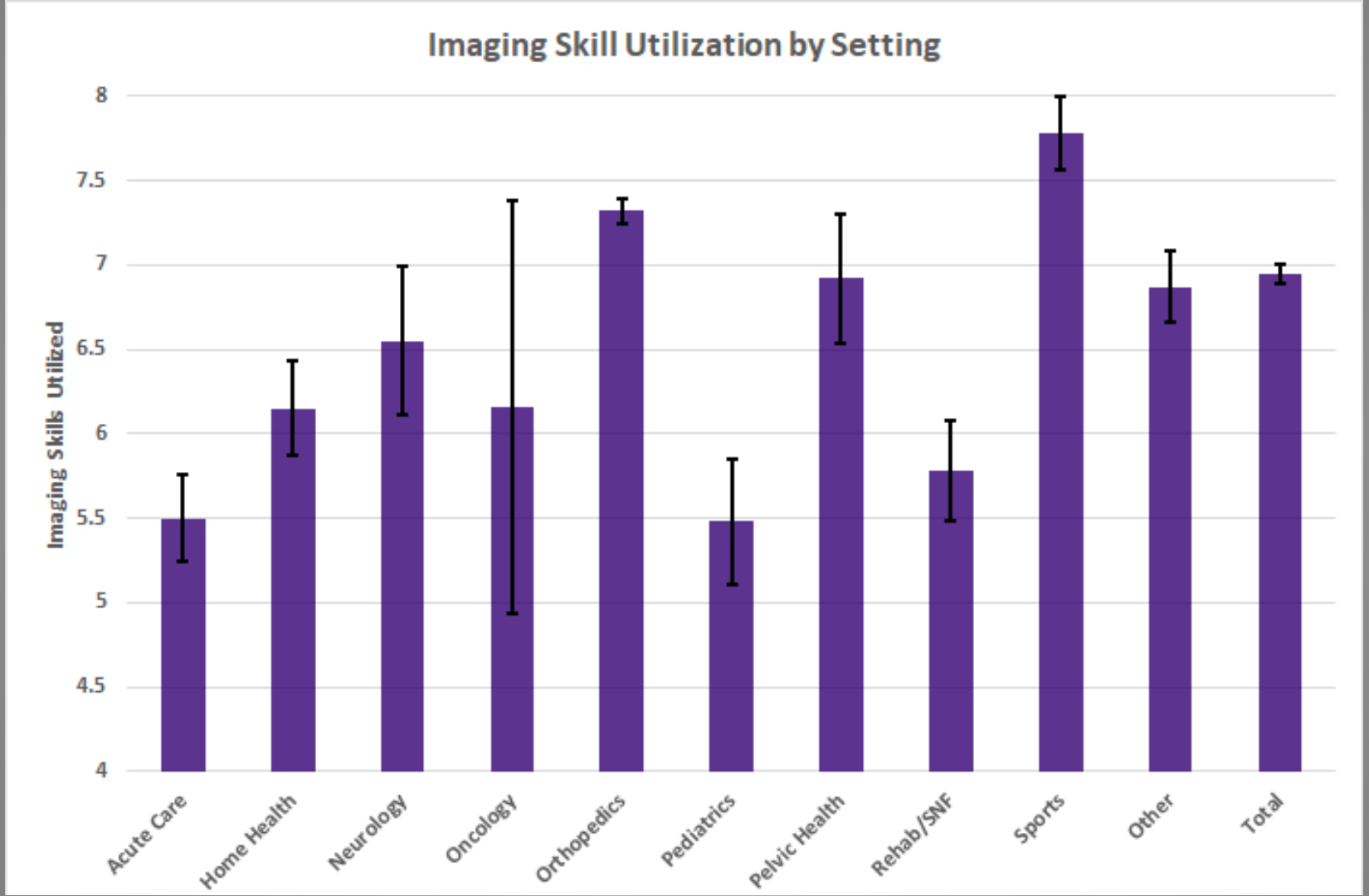
Table 2. Overall Skill Utilization: n (%).

Frequency	Skill 1	Skill 2	Skill 3	Skill 4	Skill 5	Skill 6	Skill 7	Skill 8	Skill 9
Routinely	4543 (94.72%)	3014 (62.84%)	3500 (72.98%)	3797 (79.17%)	2615 (54.52%)	4063 (84.71%)	3651 (76.13%)	4001 (83.42%)	4116 (85.82%)
Rarely	212 (4.42%)	1153 (24.04%)	683 (14.24%)	472 (9.84%)	1390 (28.98%)	565 (11.78%)	807 (16.82%)	644 (13.43%)	371 (7.73%)
Never	25 (0.52%)	485 (10.11%)	247 (5.15%)	284 (5.92%)	523 (10.90%)	108 (2.25%)	260 (5.42%)	91 (1.89%)	90 (1.88%)
Not Applicable	16 (0.33%)	144 (3.00%)	366 (7.63%)	243 (5.07%)	268 (5.59%)	60 (1.25%)	78 (1.63%)	60 (1.25%)	219 (4.57%)

Skill 1: Triage the patient
Skill 2: Utilize evidence-based imaging guidelines
Skill 3: Consider risk/benefit of imaging
Skill 4: Refer for imaging (either to a primary care provider, directly to a radiologist, or otherwise)
Skill 5: Suggest an imaging modality
Skill 6: Review imaging reports
Skill 7: Educate patients on imaging findings
Skill 8: Integrate imaging findings into treatment plan
Skill 9: Refer patient if imaging findings are outside physical therapist scope

Average 7.0 Skills

28.2% Performed All 9


Imaging Skill Utilization by Setting
Imaging Skills Utilized
8
7.5
7
6.5
6
5.5
5
4.5
4
Acute Care
Home Health
Neurology
Oncology
Orthopedics
Pediatrics
Pelvic Health
Rehab/SNF
Sports
Other
Total

Wisconsin Practice Act

(7) ORDERING X-RAYS.

(a) A physical therapist may order X-rays to be performed by qualified persons only if the physical therapist satisfies one of the following qualifications, as

1. The physical therapist holds a clinical doctorate degree in physical therapy.

2. The physical therapist has completed a nationally recognized specialty certification program.

3. The physical therapist has completed a nationally recognized residency or fellowship certified by an organization recognized by the examining board.

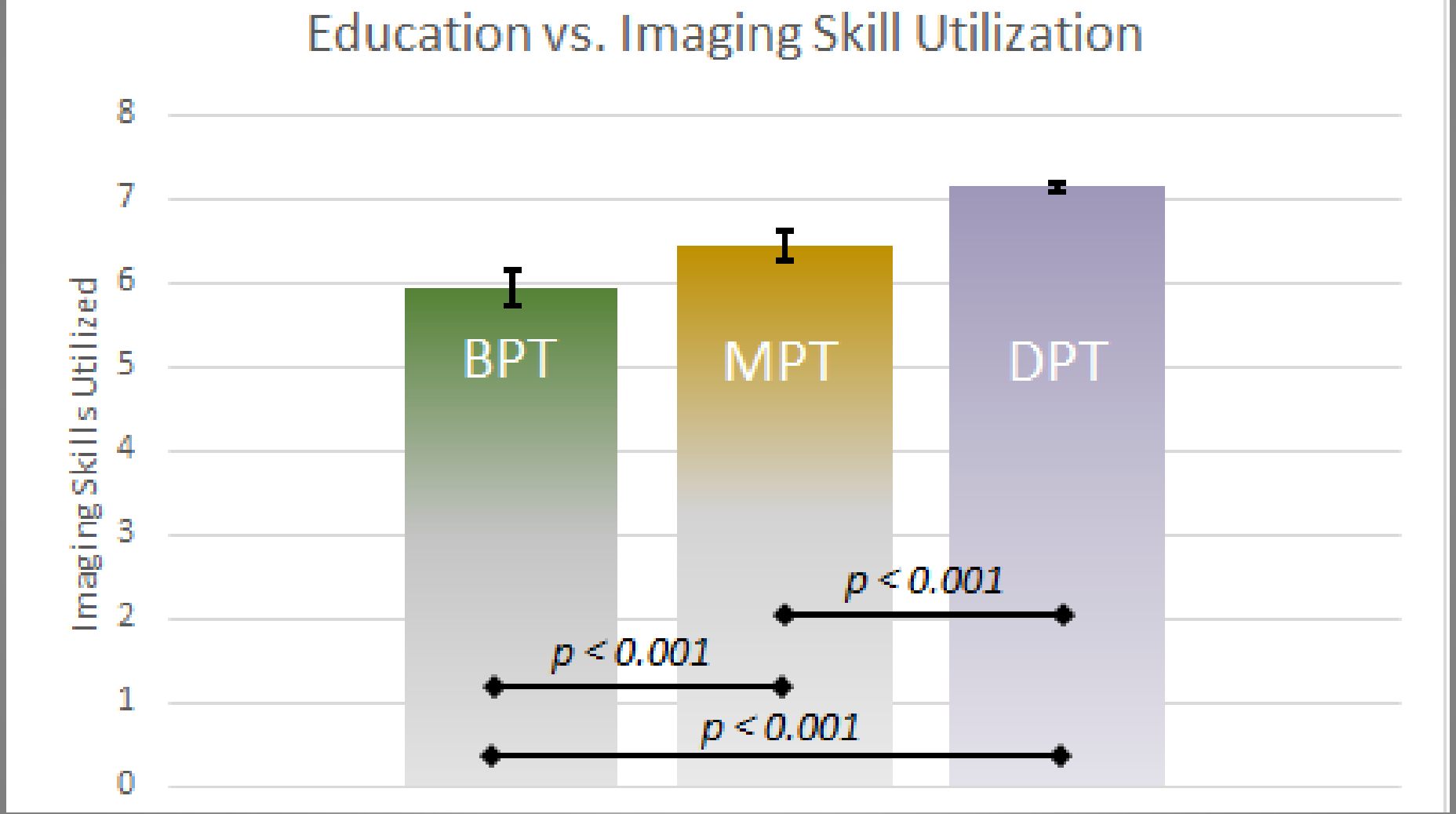
4. The physical therapist has completed a formal X-ray ordering training program with demonstrated physician involvement.

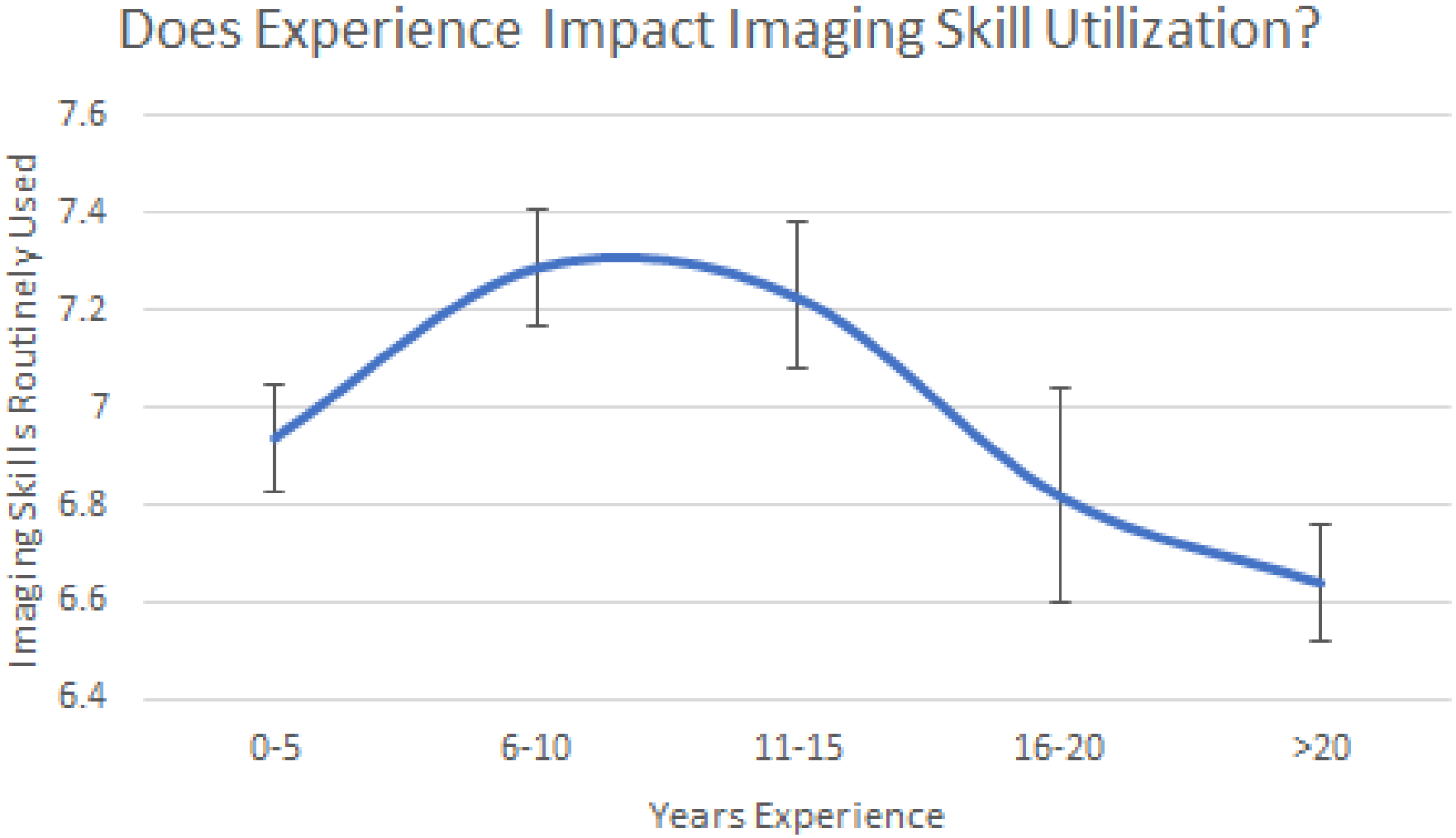
West Virginia Board Opinion

TRAINING STANDARDS

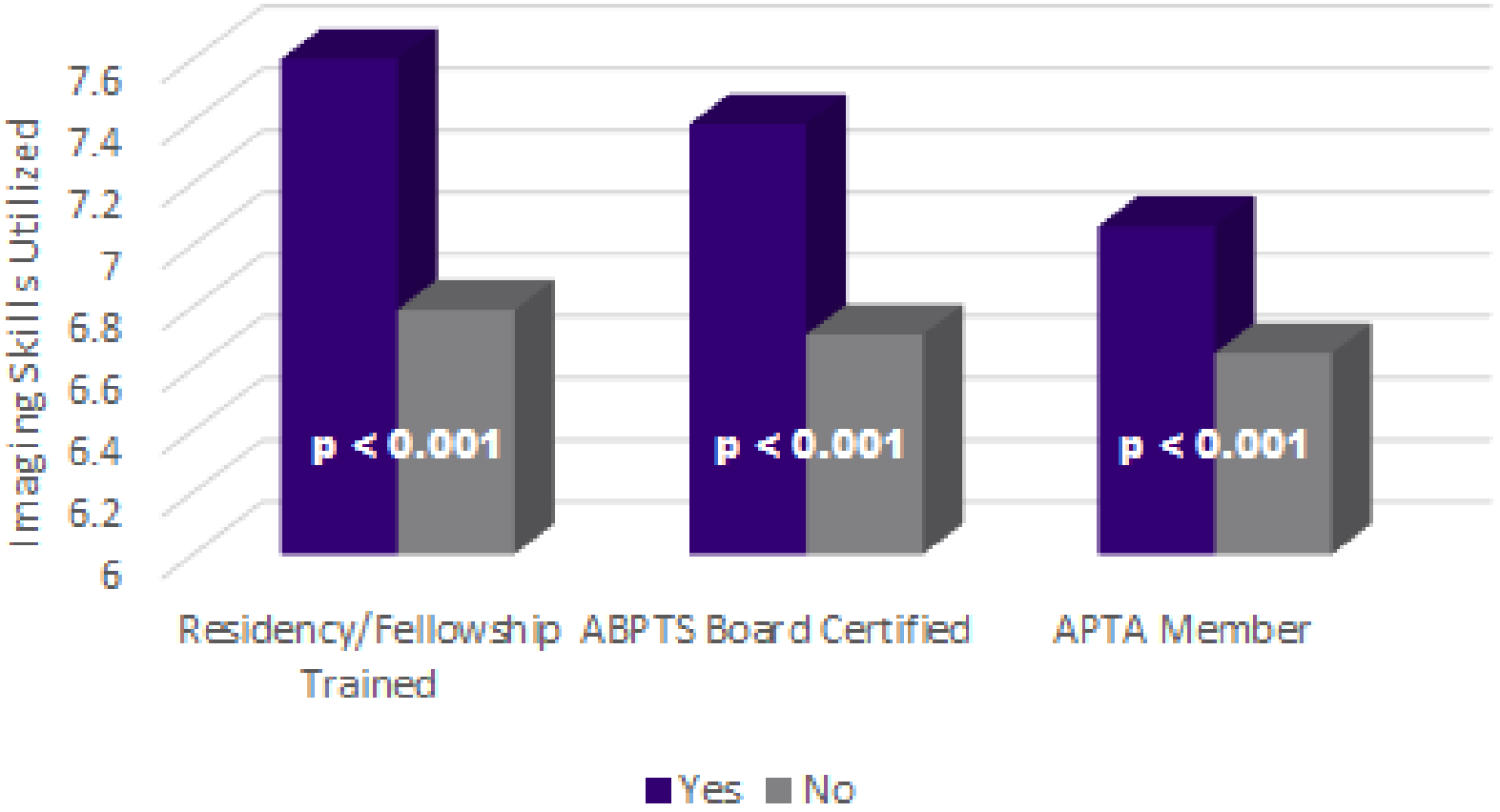
The Board recommends that licensees who refer patients to a radiologist provide evidence of one (1) of the following when requested by the WVBOPT.

- **Graduate of a CAPTE accredited Doctor of Physical Therapy (DPT) that included imaging education.**
- **Evidence of post-entry-level imaging training (e.g., t-DPT, DSc).**
- **Completion of an ABPTS residency/fellowship program that included clinical imaging.**
- **Completion of a minimum of 15 contact hours of post-entry-level continuing education in clinical imaging from a CAPTE accredited institution, APTA component or affiliate (e.g., AOPT, FAAOMPT), or any WVBOPT approved course from a reputable education provider that includes instruction in the following areas:**


Education vs. Imaging Skill Utilization
Imaging Skills Utilized
8
7
6
5
4
3
2
1
0
BPT
MPT
DPT
p < 0.001
p < 0.001
p < 0.001


Does Experience Impact Imaging Skill Utilization?
Imaging Skills Routinely Used
7.6
7.4
7.2
7
6.8
6.6
6.4
0-5
6-10
11-15
16-20
>20
Years Experience

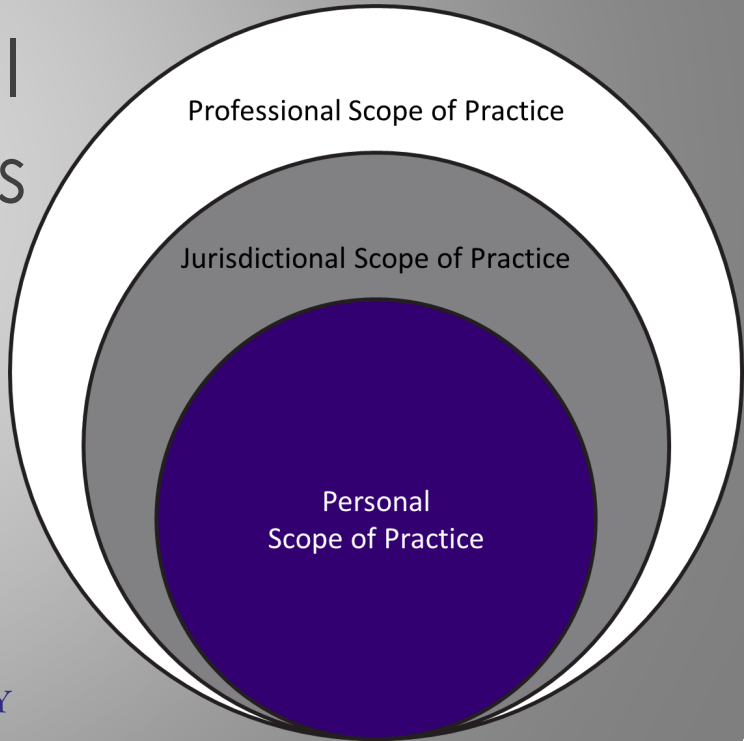
Imaging Skill Utilization Interactions



Conclusion

- Each of 9 skills routinely performed
- Average 7.0/9 skills overall
- 28.2% performing all 9 skills
  - Is this high or low?

- Findings support adding to Jurisdictional Scope



HIGH POINT UNIVERSITY

Review

- State of the States
- Three Pillars Imaging Advocacy Framework
  - Entry-Level Education
  - Continuing Education
  - Routine Practice
- Mabry, et al in JMMT
  - Imaging Skill Utilization
  - By Setting
  - By Degree
  - By Experience
  - By Res/Fellowship
  - By Board Cert
  - By APTA Status

Questions?

JOURNAL OF MANUAL & MANIPULATIVE THERAPY
https://doi.org/10.1080/10669817.2022.2106729

Physical Therapists Are Routinely Performing the Requisite Skills to Directly Refer for Musculoskeletal Imaging: An Observational Study

Lance M. Mabry[a], Richard Severin[b,c], Angela S. Gisselman[d], Michael D. Ross[e], Todd E. Davenport[f], Brian A. Young[c], Aaron P. Keil[b] and Don L. Goss[a]

[a]Department of Physical Therapy, Congdon School of Health Sciences, High Point University, One University Parkway, High Point, NC USA; [b]Department of Physical Therapy, College of Applied Health Sciences, University of Illinois at Chicago, Chicago, IL, USA; [c]Department of Physical Therapy, Robbins College of Health and Human Sciences, Baylor University , Waco, TX, USA; [d]Doctor of Physical Therapy Program, Department of Public Health and Community Medicine, School of Medicine, Tufts University, Phoenix, AZ, USA; [e]Department of Physical Therapy, Daemen University, Amherst, NY, USA; [f]Department of Physical Therapy, School of Health Sciences, University of the Pacific, Stockton, CA, USA

References

- 1. Moore JH, Goss DL, Baxter RE, et al. Clinical diagnostic accuracy and magnetic resonance imaging of patients referred by physical therapists, orthopaedic surgeons, and nonorthopaedic providers. *J. Orthop. Sports Phys. Ther.* 2005;35:67-71.
- 2. Crowell MS, Dedekam EA, Johnson MR, Dembowski SC, Westrick RB, Goss DL. Diagnostic Imaging in a Direct-Access Sports Physical Therapy Clinic: A 2-Year Retrospective Patient Analysis. *International journal of sports physical therapy*. 2016;11:708.
- 3. Boissonnault WG, Badke MB, Powers JM. Pursuit and implementation of hospital-based outpatient direct access to physical therapy services: An administrative case report. *Phys. Ther.* 2010;90:100-109.
- 4. White DM, Boissonnault WG, Boyles R, et al. *Imaging Education Manual for Doctor of Physical Therapy Professional Degree Programs*. American Physical Therapy Association - Academy of Orthopaedic Physical Therapy; 2015.
- 5. Keil AP, Baranyi B, Mehta S, Maurer A. Ordering of Diagnostic Imaging by Physical Therapists: A 5-Year Retrospective Practice Analysis. *Phys Ther*. 2019;99:1020-1026.
- 6. Moore JH, McMillian DJ, Rosenthal MD, Weishaar MD. Risk determination for patients with direct access to physical therapy in military health care facilities. *J Orthop Sports Phys Ther*. 2005;35:674-678.
- 7. Mabry LM, Notestine JP, Moore JH, Bleakley CM, Taylor JB. Safety Events and Privilege Utilization Rates in Advanced Practice Physical Therapy Compared to Traditional Primary Care: An Observational Study. *Mil Med*. 2020;185:e290-e297.
- 8. McGill T. Effectiveness of physical therapists serving as primary care musculoskeletal providers as compared to family practice providers in a deployed combat location: A retrospective medical chart review. *Mil. Med.* 2013;178:1115-1120.
- 9. Peterson G, Portström M, Frick J. Extended roles in primary care when physiotherapist-initiated referral to X-ray can save time and reduce costs. *International Journal for Quality in Health Care*. 2021;33:mzab122.
- 10. Boyles RE, Gorman I, Pinto D, Ross MD. Physical therapist practice and the role of diagnostic imaging. *J. Orthop. Sports Phys. Ther.* 2011;41:829-837.
- 11. Keil AP, Hazle C, Maurer A, et al. Referral for Imaging in Physical Therapist Practice: Key Recommendations for Successful Implementation. *Phys Ther*. 2021;101:pzab013.
- 12. Mabry LM, Boyles RE, Brismée JM, Agustsson H, Smoliga JM. Physical therapy musculoskeletal imaging authority: A survey of the World Confederation for Physical Therapy Nations. *Physiotherapy research international : the journal for researchers and clinicians in physical therapy*. 2020;25:e1822.
- 13. Boissonnault WG, White DM, Carney S, Malin B, Smith W. Diagnostic and procedural imaging curricula in physical therapist professional degree programs. *J. Orthop. Sports Phys. Ther.* 2014;44:579-586.
- 14. Rundell SD, Maitland ME, Manske RC, Beneck GJ. Survey of Physical Therapists' Attitudes, Knowledge, and Behaviors Regarding Diagnostic Imaging. Phys Ther. 2021 Jan 4;101(1):pzaa187.
- 15. Crowell MS, Mason JS, McGinniss JH. Musculoskeletal Imaging for Low Back Pain in Direct Access Physical Therapy Compared to Primary Care: An Observational Study. Int J Sports Phys Ther. 2022 Feb 2;17(2):237-246.
- 16. Froment FP, Olson KA, Hooper TL, Shaffer SM, Sizer PS, Woodhouse LJ, Brismée JM. Large variability found in musculoskeletal physiotherapy scope of practice throughout WCPT and IFOMPT affiliated countries: An international survey. Musculoskelet Sci Pract. 2019 Jul;42:104-119.
- 17. Mabry LM, Severin R, Gisselman AS, Ross MD, Davenport TE, Young BA, Keil AP, Goss DL. Physical Therapists Are Routinely Performing the Requisite Skills to Directly Refer for Musculoskeletal Imaging: An Observational Study. J Man Manip Ther. 2022 Oct;30(5):261-272.

HIGH POINT UNIVERSITY