

Lisa E. Brown PT, DPT

Board Certified Neurologic Clinical Specialist
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ACADEMIC APPOINTMENTS

Boston University, Boston MA

2009-present **Clinical Assistant Professor**, Department of Physical Therapy
College of Health and Rehabilitation Sciences: Sargent College

***Clinical Assistant Professor Appointment:** Fall and Spring semesters: 60%
Classroom teaching: DPT program, 20% Scholarship, 20% service (Department
and College)/Clinical Practice (BUPTC).*

2008-2009 **Adjunct Faculty**, Department of Physical Therapy
*I participated as an adjunct faculty member – teaching the laboratory portion of
PT 652 Neurologic Systems I, and providing guest lectures, laboratory teaching
and grading support for PT 653 Neurologic Systems II*

Simmons University, Boston, MA

2010-2011 **Guest Lecturer**, Department of Physical Therapy
*Participated as a guest lecturer and laboratory instructor for multiple courses in
the Physical Therapy program specifically in the content area of neurologic
systems*

Massachusetts General Hospital Institute of Health Professionals, Charlestown MA

2008-2009 **Lecturer**, Department of Physical Therapy
*I participated as a lecturer and in course development for multiple courses in the
Physical Therapy program specifically in the content area of neurologic systems*

CLINICAL APPOINTMENTS

Boston University Physical Therapy Center (BUPTC), Boston, MA

2011-present **Senior Physical Therapist**
*Provide physical therapy services to individuals with neurological conditions and
serve as a mentor to physical therapy staff and students.*

Center for Neurorehabilitation, Boston MA

- 2010-present** **Physical Therapy Consultant**
Provided patient care to individuals with neurologic diagnosis; mentor to staff and DPT students
- 2010-2012** **Physical Therapy Consultant**
Implemented Interdisciplinary Diagnostics Clinic; responded to inquiries from patients with Parkinson disease through the American Parkinson Disease Association exercise helpline; implemented clinical assessments for a prospective, longitudinal cohort study in patients with Parkinson disease.

Spaulding Framingham Out-patient Center, Framingham, MA

- 2009-2014** **Expert Physical Therapist (Per Diem)**
Provided physical therapy services to individuals with neurological conditions and served as a mentor to physical and occupational therapy staff
- 2002-2009** **Expert Physical Therapist (Full Time)**
Provided clinical care for individuals with neurological conditions and served as a mentor to physical and occupational therapy staff. Participated as a member of the clinical team specializing in orthotic and wheelchair prescription. Served as a member of the international post-polio care team. Provided staff education on topics related to neurological conditions.

Metro-west Medical Center, Natick, MA

- 1998-2002** **Senior Physical Therapist**
Developed a clinical center specializing in the treatment of patients with vestibular disorders. Provided physical therapy services in both outpatient and acute in-patient settings to individuals with neurological and musculoskeletal conditions. Served as a mentor to physical therapy staff and students. Provided education on topics related to neurological conditions.

Enfield Medical Center, Enfield CT

- 1997-1998** **Contract Physical Therapist**
Provided physical therapy services in a variety of settings including in-patient ICU, inpatient acute care, and outpatient.

Independent Contractor, Puerto Rico

- 1995-1997** **Physical Therapist (per diem)**
Provided physical therapy services to individuals with adult and pediatric neurologic conditions in a variety of setting including inpatient ICU, inpatient acute, and home care. Consultant for development of pediatric outpatient clinic.

Spaulding Rehabilitation Hospital, Boston, MA

1993-1995

Staff Physical Therapist

Staff physical therapist in inpatient acute rehabilitation stroke and brain injury units. Provided physical therapy services of individuals with primarily stroke and brain injury among other neurologic diagnosis. Participated in Bracing clinics for the prescription of lower extremity orthotics, interdisciplinary rounds, and staff Inservice education.

EDUCATION

Massachusetts General Hospital Institute of Health Professions:

May 2009

Boston, MA

Doctor of Physical Therapy

Massachusetts General Hospital Institute of Health Professions:

Sept 2008

Boston, MA

Certificate of Advanced Study in Neurologic Physical Therapy

University of Vermont:

May 1993

Burlington, VT

Bachelor of Science in Physical Therapy

BOARD CERTIFICATIONS AND LICENSURE

Board Certified Neurologic Clinical Specialist (NCS)

American Board of Physical Therapy Specialists, Certification # 19134

Initial Certification 2009-2019; Renewed certification 2019-2029

Vestibular Rehabilitation Specialist

Vestibular Rehabilitation Competency, March 2001

Cervicogenic Competency, Sept 2006

Physical Therapy License

AH 9302-PT, 1993 – present

Commonwealth of Massachusetts, Division of Registration in Allied Health Professions

AWARDS

Boston University Clinical Faculty Scholarship Grant/ Deans Summer Scholarship.....

I have been the fortunate recipient of the Boston University Clinical Faculty Scholarship Grant/Deans Summer Scholarship for 10 years. The purpose of the award is to support excellence in scholarship among clinical faculty. Applications were submitted to a review panel and scored on the potential for clinical or scientific impact, feasibility of the project, alignment to the strategic plan of Sargent College, applicant expertise, and potential for applicant career development. The following table described the product that was supported by each grant award.

| Year | Award | Work Supported/Product |
|------|---|--|
| 2022 | Clinical Faculty Scholarship Grant recipient, Boston University Sargent College | Manuscript titled " <i>Key Challenges in Functional Electrical Stimulation Clinical Practice Guideline Implementation</i> " submitted to <i>Frontiers in Rehabilitation</i> . |
| 2021 | Clinical Faculty Scholarship Grant recipient, Boston University Sargent College | Revision of manuscript "A Survey of Clinical Practice Patterns of Physical Therapists for the Use of Ankle Foot Orthoses or Functional Electrical Stimulation Post-Stroke" which was accepted for publication in the <i>Journal of Prosthetics and Orthotics</i> |
| 2020 | Clinical Faculty Scholarship Grant recipient, Boston University Sargent College | Support for data analysis and draft development of the manuscript titled "A Survey of Clinical Practice Patterns of Physical Therapists for the Use of Ankle Foot Orthoses or Functional Electrical Stimulation Post-Stroke" |
| 2019 | Deans Summer Scholarship recipient Boston University Sargent College | Final draft revision and article preparation for Johnston, Therese E. PT, MSPT, PhD, MBA*; Keller, Sarah PT, DPT, NCS; Denzer-Weiler, Caitlin PT, DPT, NCS; Brown, Lisa Brown, PT, DPT, NCS* . A Clinical Practice Guideline for the Use of Ankle-Foot Orthoses and Functional Electrical Stimulation Post-Stroke. <i>Journal of Neurologic Physical Therapy</i> : April 2021 - Volume 45 - Issue 2 - p 112-196 doi: 10.1097/NPT.0000000000000347 |
| 2018 | Deans Summer Scholarship recipient Boston University Sargent College | Continued CPG high impact scholarship development. This stage of the project included completion of the initial draft of the clinical practice guideline. |
| 2017 | Deans Summer Scholarship recipient, Boston University Sargent College | Continued CPG development including the synthesis and analysis of the literature search. The appraisal team training process for the CPG was documented and presented as a poster: Brown LE , Denzel-Weiler C, Keller S, Johnston T. Clinical Practice Guideline Appraisal Team Training Process and Outcomes. American Physical Therapy Association Combined Sections Meeting New Orleans, LA 2018 |

| | | |
|-------------|---|---|
| 2016 | Deans Summer Scholarship recipient, Boston University Sargent College | Initial stages of Clinical Practice Guideline development were completed including: Formalized the Advisory Board, Formalized Critical Appraisal Team, Initiated grant with 75% completion toward October 1 st deadline, Finalized clinical questions. Researched and finalized foundational elements including software needs, training modules for appraisal team to be created. |
| 2015 | Deans Summer Scholarship recipient, Boston University Sargent College | Development of peer reviewed clinical summary publication in PT Now: Guillain Barre Syndrome. Plummer, L, Brown L , Riley E. https://www.apta.org/patient-care/evidence-based-practice-resources/clinical-summaries/guillain-barre-syndrome |
| 2014 | Deans Summer Scholarship recipient, Boston University Sargent College | Brown LE , Lewis CL. Student and Faculty Learning Styles in a DPT program. American Physical Therapy Association, Combined Sections Meeting. Anaheim CA. Feb 2016 (poster) |
| 2013 | Deans Summer Scholarship recipient, Boston University Sargent College | Work supported: Data collections and synthesis for learning Styles project with Dr. Cara Lewis. |

Collaborative Learning: Faculty Learning Community Stipend.....

The Boston University Center for Teaching & Learning (CTL) Scholarship of Teaching & Learning Faculty Learning Community (SoTL FLC) supports faculty interested in improving their teaching practice through inquiry and scholarship.

| | | |
|-------------|--|--|
| 2019 | Collaborative Learning: Faculty Learning Community Stipend Recipient (\$1000.00) | The funding from this stipend was used to support participation in a community of educators with a focus on receiving support for the development of effective student learning activities and assessments |
| 2018 | Collaborative Learning: Faculty Learning Community Stipend Recipient (\$1000.00) | The funding from this stipend was used to support the development of interactive case-based learning modules for the core clinical courses in the DPT program. |

American Physical Therapy Grant.....

| | | |
|-------------|--|---|
| 2017 | American Physical Therapy Association 2/17-4/21 Co-leader \$10,000 | Grant funding to support the development of the Physical Therapy Management of Foot Drop using Ankle Foot Orthoses or Functional Electrical Stimulation in People with Post-stroke Hemiplegia: A Clinical Practice Guideline. |
|-------------|--|---|

Clinical Practice Awards.....

| | | |
|-------------|--|---|
| 2009 | Shelby Cullum Davis Foundation Award for Clinical Excellence Spaulding Rehabilitation Hospital | Annual award in the Partners Healthcare Network recognizing clinical excellence. |
| 2008 | Shelby Cullum Davis Foundation Award for Clinical Excellence Spaulding Rehabilitation Hospital | Annual award in the Partners Healthcare Network recognizing clinical excellence. |
| 2008 | Partners in Excellent Award for outstanding clinical competence. Partners Healthcare Network | Award in the Partners Healthcare Network acknowledge staff members for their “above and beyond” efforts in support of the Partners HealthCare mission |

SCHOLARLY ACTIVITY

Peer Reviewed Publications.....

5. **Brown L**, Street T, Adonis A, Johnston TE, Ferrante S, Burridge JH and Bulley C (2023) Implementing functional electrical stimulation clinical practice guidelines to support mobility: A stakeholder consultation. *Front. Rehabil. Sci.* 4:1062356. doi: 10.3389/fresc.2023.1062356 <https://www.frontiersin.org/articles/10.3389/fresc.2023.1062356/full>

Contributions: First author. I conceived the study, participated in data collection, conducted the data analysis and led the manuscript preparation.

4. **Brown, L**; Johnston, TE; Keller, S; Denzer-Weiler, C. A Survey of Clinical Practice Patterns of Physical Therapists for the Use of Ankle-Foot Orthoses or Functional Electrical Stimulation Poststroke. *Journal of Prosthetics and Orthotics* ():10.1097/JPO.0000000000000456, December 20, 2022. | DOI: 10.1097/JPO.0000000000000456

https://journals.lww.com/jpojournl/Abstract/9900/A_Survey_of_Clinical_Practice_Patterns_of_Physical.25.aspx

Contributions: First author. I conceived the study, developed the survey, participated in data collection and analysis and led the manuscript preparation.

3. *Johnston TE, Keller S, Denzer-Weiler C, * **Brown L**. A Clinical Practice Guideline for the Use of Ankle-Foot Orthoses and Functional Electrical Stimulation Post-Stroke. *J Neurol Phys Ther.* 2021 Apr 1;45(2):112-196. doi: 10.1097/NPT.0000000000000347. PMID: 33675603.

<https://journals.lww.com/jnpt/pages/articleviewer.aspx?year=2021&issue=04000&article=00006&type=Fulltext>

Contributions: Co-led the development of the clinical practice guidelines, served as senior and corresponding author. I co-conceived the project, co-led the recruitment of advisory board, recruitment and training of appraisal team, development of clinical question, completion of literature search and literature review, data collection, data oversight and synthesis, figure preparation, manuscript writing.

Almetric score: 72 (99th percentile) placing this article in the top 1% of articles tracked

2. **Brown L**, Camarinos J. The Role of Physical Therapy in Concussion Rehabilitation. *Semin Pediatr Neurol*. 2019 Jul;30:68-78. doi: 10.1016/j.spen.2019.03.011. Epub 2019 Mar 27. PMID: 31235023. <https://www.sciencedirect.com/science/article/abs/pii/S1071909119300191?via%3Dihub>

Contributions: First author. I led the development of this invited review

1. Ellis T, Boudreau JK, DeAngelis TR, **Brown LE**, Cavanaugh JT, Earhart GM, Ford MP, Foreman KB, Dibble LE. Barriers to exercise in people with Parkinson disease. *Phys Ther*. 2013 May;93(5):628-36. doi: 10.2522/ptj.20120279. Epub 2013 Jan 3. PMID: 23288910; PMCID: PMC3641403.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3641403/>

Contributions: I was responsible for data collection and reviewing the final drafts of the manuscript.

Book Chapter.....

Brown, LE. Examination, Diagnosis, Exercise Intervention and Outcome for Individuals With Motor Control and Motor Function Disorders. Section 3 Chapter 12. In: *Clinical Exercise Pathophysiology for Physical Therapy: Examination, Testing, and Exercise Prescription for Movement-Related Disorders*. Slack Incorporated Thorofare, NJ 2014. ISBN 13:9781617116452

<https://www.slackbooks.com/clinical-exercise-pathophysiology-for-physical-therapy-examination-testing-and-exercise-prescription-for-movement-related-disorders/>

Contributions: This is a comprehensive clinical exercise physiology textbook for physical therapists widely adopted by DPT programs across the United States. I was the primary author for the chapter focused on the topic of exercise prescription for persons with and neurologic disorders. The textbook received positive international reviews published in the journal Physiotherapy Canada, and the European Journal of Physiotherapy.

Posters/Published Abstracts/Conference Proceedings.....

8. Street T, **Brown L**, Adonis A, Johnston T, Ferrante S, Burrige J, Bully C. Key Challenges in Functional Electrical Stimulation Clinical Practice Guideline Implementation. *Artificial Organs* (conference proceeding), In Press 2022

7. **Brown L**, Johnston T. Application of the AFO and FES Clinical Practice Guideline to a Person Post Stroke. *RehabWeek*. Rotterdam, The Netherlands 25-29 July 2022. (poster)

6. **Brown LE**, Denzel-Weiler C, Keller S, Johnston T. Clinical Practice Guideline Appraisal Team Training Process and Outcomes. American Physical Therapy Association Combined Sections Meeting New Orleans, LA 2018 (poster/published abstract)

5. **Brown LE**, Vann L. Multimodal Physical Therapy Rehabilitation for the Management of Post-Concussion Syndrome in an Active Female Adult: A Case Study. American Physical Therapy Association NEXT Boston, Ma June 2017 (poster/published abstract)

4. **Brown LE**, Lewis CL. Student and Faculty Learning Styles in a DPT program. American Physical Therapy Association, Combined Sections Meeting. Anaheim CA. Feb 2016 (poster/ published abstract)

3. Crandall S, Padgett PK, Hendron K, DeAngelis TR, **Brown LE**, Ellis T. The Effects of an Intensive Balance Exercise Program on Near Falls, Balance, and Fear of Falling in Near Fallers with Parkinson Disease. American Physical Therapy Association, Combined Section Meeting, Las Vegas, NV. 2014 (poster/published abstract)

2. Padgett PK, Crandall S, Hendron K, DeAngelis TR, **Brown LE**, Ellis T. Modifiable Characteristics of Near Falls in High-Level Patients with Parkinson Disease. American Physical Therapy Association, Combined Section Meeting, Las Vegas, NV. 2014 (poster/ published abstract)

1. Ellis T, Boudreau JK, DeAngelis TR, **Brown LE**, Cavanaugh JT, Earhart GM, Ford MP, Foreman KB, Dibble LE. Barriers to Exercise in Persons with Parkinson Disease. American Physical Therapy Association, Combined Sections Meeting, Chicago IL. 2011 (poster/ published abstract)

International / National Presentations

Invited Presentations.....

28. Salam Y, Malas B, Charlton P, Johnston T, **Brown L**. *Why Orthotic Treatment Should be a First Line Approach for Early Gait Rehabilitation Following Stroke*. International Society for Prosthetics and Orthotics. (Virtual) November 19, 2022

27. **Brown L.**, Johnston T., Bulley C., Adonis A., Street T. *Bridging the Gap Between FES Research and Clinical Implementation (Virtual)*; International Functional Electrical Stimulation Society / Association of Chartered Physiotherapists in Neurology; November 9, 2021

26. **Brown L.**, Johnston T. *A Clinical Practice Guideline for the Use of Ankle-Foot Orthoses and Functional Electrical Stimulation Post-Stroke (Virtual)*; Good Shepard Penn Partners / Penn Institute of Rehabilitation Medicine; October 26, 2021

25. Johnston T., **Brown L**. *A Clinical Practice Guideline for the Use of Ankle-Foot Orthoses and Functional Electrical Stimulation Post-Stroke. (Virtual)*
APTA Pennsylvania Neurologic Special Interest Group; July 22, 2021

24. **Brown L.**, Johnston T. *A Clinical Practice Guideline for the Use of Ankle-Foot Orthoses and Functional Electrical Stimulation Post Stroke. (Virtual)*
International Functional Electrical Stimulation Society; June 22, 2021

23. **Brown L.**, Frederick J. *Lower Extremity Orthotic Management of Stroke Patients: What type of AFO should I prescribe and why? (Virtual)*
27th Annual Interdisciplinary Stroke Course: New and Changing Practices
Shirley Ryan Ability Lab Chicago, IL; May 6-7, 2021

22. Plummer L., **Brown L**. *Clinical Management of Guillain-Barre Syndrome Across the Continuum of Care*.
40th Annual Neurorehabilitation Conference on Traumatic Brain Injury. Boston, MA; November 2019

21. **Brown L.**, Johnston T. *Clinical Application of AFO and FES for Foot Drop in Individuals Post Stroke*
40th Annual Neurorehabilitation Conference on Traumatic Brain Injury. Boston, MA; November 2019

Peer Reviewed Conference Presentations.....

20. Salam Y, Malas B, Charlton P, Johnston T, **Brown L**. *Why Orthotic Treatment Should be a First Line Approach for Early Gait Rehabilitation Following Stroke*. ACCEPTED
International Society for Prosthetics and Orthotics 19th World Congress. Guadalajara, Mexico April 2023
19. **Brown L**, Johnston T. *Applying the Clinical Practice Guideline for Use of AFO and FES Post-Stroke. Decision Making In Action*. ACCEPTED
International Society for Prosthetics and Orthotics 19th World Congress. Guadalajara, Mexico April 2023
18. **Brown L**, Johnston TE, Kenworthy S, Awad L, Cornforth E. *Swing into Action: Applying the Clinical Practice Guideline for Use of AFO and FES Post-Stroke One Day Pre-Conference*
ACCEPTED
Combined Sections Meeting, San Diego CA. February 2023
17. **Brown L**, Johnston TE, Cornforth E, Miler B. *Applying the Clinical Practice Guideline for Use of AFO and FES Post-Stroke: Shared Decision Making In Action*.
Academy of Neurologic Physical Therapy Annual Conference, Minneapolis, MN. October 14, 2022
16. **Brown L.**, *Key Challenges in Functional Electrical Stimulation Clinical Practice Guideline Implementation*
RehabWeek, Rotterdam Netherlands July 27, 2022
15. **Brown L.**, Johnston T., Burrige, J., Bulley C., Adonis A., Street T. *Development of Clinical Guidelines for FES in Mobility*.
RehabWeek Virtual September 25, 2021
14. Johnston T., **Brown LE.**, Denzel-Weiler C., Keller S. *Physical Therapy Management of Foot Drop using Ankle Foot Orthoses or Functional Electrical Stimulation in People with Post-stroke Hemiplegia: An Evidence Based Clinical Practice Guideline*.
American Physical Therapy Association Combined Sections Meeting Washington DC January 2019
13. **Brown LE.**, Callahan J. *Expanding Neurologic Expertise: Introduction to Vestibular Rehabilitation*.
American Physical Therapy Association 2-day conference Boston, MA October 2016
12. Callahan, J; Nash, J; **Brown LE**; Anson E; Denham T. *The ABC's of Vestibular Rehabilitation*.
2 day pre-conference, American Physical Therapy Association. Combined Sections Meeting, Las Vegas NV. February 2014
11. Callahan, J; Nash, J; **Brown L**; Anson E; Denham T. *Expanding Neurologic Expertise: Introduction to Vestibular Rehabilitation*. American Physical Therapy Association Boston, Ma. November 2013.

Regional Presentations

Invited

10. **Brown L.**, Cornforth B. *A Clinical Practice Guideline for the Use of Ankle-Foot Orthoses and Functional Electrical Stimulation Post-Stroke*; APTA MA Chapter Neurologic Special Interest Group Boston, MA; May 27, 2021

9. **Brown. L.** *From IV Step to Boston*
APTA MA Chapter Neurologic Special Interest Group
Boston MA; October 2016

8. **Brown L.** *Comprehensive Concussion Management*
Boston University, Boston MA; August 2016

7. **Brown L.** *Concussion Management. A Case based presentation.*
Boston University, Occupational Health Invited Lecture Series. Boston, MA; Feb 2016

6. **Brown, L.** *Dizziness and the Older Adult.*
Visiting Nurses of Boston.
Boston, MA and Braintree MA; September 2010.

5. **Brown L.**, Clements C.
Boston University Sargent College Interdisciplinary Grand Rounds Concussion and Mild TBI;
Fall 2009

4. **Brown. L.** *New Technologies and Approaches to Balance Interventions*
APTA Ma Central District.
Gardner, MA. April 2009

Peer Reviewed Professional Presentations

The following peer reviewed professional presentations were developed and completed with Doctor of Physical Therapy students as part of a practicum project. Throughout each project my role included mentoring the DPT student on the conceptual formulation of the topic, navigation of the submission process, and development of the presentation.

3.*Marinelli C, **Brown L.** *High Intensity Interval Training (HIIT) for Individuals with Multiple Sclerosis*
American Physical Therapy Association of Massachusetts Annual Conference
November 2021 (Virtual)

2.*Lopez M, Printz J, **Brown L.** *Food for Thought: How Nutrition can Facilitate Concussion Recovery*
American Physical Therapy Association of Massachusetts Annual Conference
November 2019

1.*Cheney R, Treske E, **Brown L.** *Mindfulness Based Yoga Practice for Individuals with Chronic Brain Injury: A Feasibility Study*
American Physical Therapy Association of Massachusetts Annual Conference
November 2018
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Invited Podcasts.....

Brown L. *Application of Ankle Foot Orthoses and Functional Electrical Stimulation in Neurologic Populations.*
 Academy of Neurologic Physical Therapy Degenerative Diseases Special Interest Group and Journal of Neurologic Physical Therapy Collaboration: Podcast Episode 14 July, 2021
<https://www.neuropt.org/special-interest-groups/degenerative-diseases/podcasts>

Brown L., Johnston T. *Discussing the Clinical Practice Guideline for the Use of Ankle Foot Orthoses and Functional Electrical Stimulation Post Stroke*
 Academy of Neurologic Physical Therapy Stroke Special Interest Group and Journal of Neurologic Physical Therapy Collaboration: Podcast Episode 14 April 7, 2021
<https://www.neuropt.org/special-interest-groups/stroke/podcasts>

Knowledge Translation Resources.....

As a co-author for the Clinical Practice Guideline Use of Ankle Foot Orthoses and Functional Electrical Stimulation Post Stroke and a member of the Knowledge Translation Task Force for this CPG, I was an author or reviewer for the following knowledge translation documents. All documents were created and published on neuropt.org in 2022.

| Resource Title | Link to Resource | Role in Development |
|--|---|---------------------|
| Gait Analysis Quick Reference for Clinicians | https://www.neuropt.org/docs/default-source/cpgs/afo-fes/quick-reference-gait-analysis-2022.pdf?sfvrsn=20245d43_0 | Author |
| Clinical Effects of an AFO/FES | https://www.neuropt.org/docs/default-source/cpgs/afo-fes/clinical-effects-of-an-afofes.pdf?sfvrsn=19eb5f43_0 | Reviewer |
| Improve Quality of Life | https://www.neuropt.org/docs/default-source/cpgs/afo-fes/action-statement-1-ql-final.pdf?sfvrsn=a6715d43_2 | Reviewer |
| Improve Gait Speed | https://www.neuropt.org/docs/default-source/cpgs/afo-fes/action-statement-2-gait-speed-final.pdf?sfvrsn=a7715d43_2 | Reviewer |
| Improve Other Mobility | https://www.neuropt.org/docs/default-source/cpgs/afo-fes/action-statement-3-other-mobility-final.pdf?sfvrsn=ae715d43_2 | Author |
| Improve Dynamic Balance | https://www.neuropt.org/docs/default-source/cpgs/afo-fes/action-statement-4_balance_final.pdf?sfvrsn=af715d43_2 | Reviewer |
| Improve Walking Endurance | https://www.neuropt.org/docs/default-source/cpgs/afo-fes/action-statement-5-walking-endurance-final.pdf?sfvrsn=ac715d43_2 | Reviewer |
| Improve Plantarflexor Spasticity | https://www.neuropt.org/docs/default-source/cpgs/afo-fes/action-statement-6-spasticity_final.pdf?sfvrsn=b2715d43_2 | Author |
| Improve Muscle Activation | https://www.neuropt.org/docs/default-source/cpgs/afo-fes/action-statement-7-muscle-activation-final.pdf?sfvrsn=be715d43_2 | Reviewer |

| | | |
|--|---|----------|
| Improve Gait Kinematics | https://www.neuropt.org/docs/default-source/cpgs/afo-fes/action-statement-8-kinematics-final.pdf?sfvrsn=b4715d43_2 | Reviewer |
| AFO Types & Considerations | https://www.neuropt.org/docs/default-source/cpgs/afo-fes/afo-tablefinalb0fb3ba5390366a68a96ff00001fc240.pdf?sfvrsn=76f85d43_2 | Reviewer |
| Design Features That Impact Effects of AFOs | https://www.neuropt.org/docs/default-source/cpgs/afo-fes/afo-feature-finalaffb3ba5390366a68a96ff00001fc240.pdf?sfvrsn=69f85d43_2 | Reviewer |
| Functional Electrical Stimulation Considerations | https://www.neuropt.org/docs/default-source/cpgs/afo-fes/fes-table-finalc4fb3ba5390366a68a96ff00001fc240.pdf?sfvrsn=2f85d43_2 | Reviewer |

Academy of Neurologic Physical Therapy Special Interest Groups Resources.....

I created the following documents for the Academy of Neurologic Physical Therapy. Each document is a Patient Education Fact Sheet developed for various Academy of Neurologic Physical Therapy Special Interest Groups (SIG). For each contribution I was identified as an expert on the topic and asked to submit a fact sheet on the topic. Each item was peer reviewed prior to publication on the SIG web page.

| Document Title | Web link | Special Interest Group | Year Published/ Revised |
|--|---|-------------------------------|-------------------------|
| Unilateral Vestibular Hypofunction | https://www.neuropt.org/docs/default-source/vsig-english-pt-fact-sheets/unilateral-vestibular-hypofunction54a135a5390366a68a96ff00001fc240.pdf?sfvrsn=88a25343_0 | Vestibular Rehabilitation SIG | 2014, revised 2015 |
| Physical Therapy and Parkinson Disease | https://www.neuropt.org/docs/default-source/ddsig-fact-sheet-updates-2022/pdandpt-2022.pdf?sfvrsn=c0025d43_2 | Degenerative Diseases SIG | 2015, revised 2022 |
| Parkinson Disease and Exercise | https://www.neuropt.org/docs/default-source/ddsig-fact-sheet-updates-2022/pd-and-exercise-2022.pdf?sfvrsn=d4025d43_2 | Degenerative Diseases SIG | 2015, revised 2022 |

Media.....

The content of these articles were intended to inform the public regarding common neurologic dysfunction and the role of physical therapy.

Brown, L. “Battling Parkinson’s Disease with Information”, Metro-west Daily News, July 2009

Brown, L. “Running easy” Metro-west Daily News, May 2008

Brown, L. “What’s that noise”, Metro-west Daily News, November 2007

Brown, L. “Don’t get caught of balance”, Metro-west Daily News, February 2006

Brown, L. “Feeling dizzy?” Metro-west Daily News, 2006

Peer Reviewed Instructional Materials.....

The following courses were developed for various online education platforms to provide education to physical therapists. Each contribution provides instruction on topics related to neurologic physical therapy to advance the knowledge base and clinical decision-making skills of practicing clinicians.

Brown, L. Johnston T, Cornforth E, Miller B. *Swing in Action: A Clinical Practice Guideline for Use of AFO or FES Post-Stroke*.

Academy of Neurologic Physical Therapy Education Center. Synapse Course IN DEVELOPMENT

Brown, LE. *A Comprehensive Evidenced Based Approach to Concussion Management for the Physical Therapist*. Elite Healthcare October 2020

<https://www.elitelearning.com/physical-therapy/courses/concussion-management-a-comprehensive-evidence-based-approach-for-the-physical-therapist/>

Brown L. *Clinical Decision Making for the Use of Lower Extremity Orthotics and Functional Electrical Stimulation to Improve Outcomes in Individuals with Neurologic Dysfunction*.

Institute for Knowledge Translation September 2020

Description: This online home study course was designed for the Institute of Knowledge Translation. A series of 9 modules were created to provide background information on the application of AFOs and FES, assessment considerations, and the clinical decision-making process for physical therapists. To date the course has been completed by 38 PTs and is standard instructional content for 8 neurologic residency programs.

Brown, LE. *A Comprehensive Evidenced Based Approach to Concussion Management for the Physical Therapist*. Western Schools September 2017

Plummer L, **Brown L**, Riley E. *Guillain Barre Syndrome*. PT Now Clinical Summary. 2017

<https://www.apta.org/patient-care/evidence-based-practice-resources/clinical-summaries/guillain-barre-syndrome>

TEACHING EXPERIENCE

Boston University.....

Primary Instructor

PT 653: Neurological Systems II (6 credits)

Spring 2010-present

This course (60-70 students) is the second of a series of 2 courses on the Examination and Treatment of Neurological Systems for Doctor of Physical Therapy Students. This course emphasizes evidence based physical therapy management for people with specific neurological disorders. Common diagnostic groups are chosen with the intent of enhancing specific knowledge as well as developing a general hypothesis driven approach that applies to any type of neurological diagnosis. The included diagnoses will illustrate how decision-making in physical therapy considers issues of age (life span), natural history, stage in the disease process, and nature (stable vs. progressive) of specific neurological disorders. Laboratory sessions include

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community participants as lab instructors with various neurologic diagnosis such as Brain Injury, Parkinson Disease, Multiple Sclerosis, and Spinal Cord Injury. Students will learn to develop a plan for examination, including the most sensitive and specific standardized examination tools, and to develop a plan of care that is specific to various diagnostic groups and that is based on current evidence. A strong emphasis is placed on developing the communications skills of the students with a focus on patient first language and motivational interviewing skills.

HP804: Practical Teaching Experience (2 credits)

Spring 2022

This course is an independent study for a PhD student in the Rehabilitation Sciences Program. The emphasis of this course was to instruct the PhD candidate on the design and implementation of instructional materials for Doctor of Physical Therapy students. Types of materials created included lectures, labs, and assessments on topics related to neurologic dysfunction, promoting the application of evidence to practice and enhancing clinical decision-making skills. This independent study occurred in collaboration with PT 653 Neurologic Systems II which is the second clinical neurologic course for the DPT students.

Co-Instructor

PT 652 Neurological Systems I (6 credits)

Fall 2009 – present

This course (60-70 students) is the first of a series of 2 courses on the Examination and Treatment of Neurological Systems for Doctor of Physical Therapy Students. The purpose of this course is to provide a foundation for examining, evaluating, and determining appropriate interventions for individuals who have movement dysfunction secondary to neurological deficits. Students will learn key elements of a hypothesis driven neurological examination guided by the ICF model of disablement framework including the pathophysiology, patient history, and functional deficits associated with or resulting from disease or injury to the nervous system. Laboratory sessions develop students' skills in movement analysis, examination, and evaluation of movement dysfunction in partnership with community participants as lab instructors who have a neurologic dysfunction such as a stroke. Emphasis will be on enhancing students' ability to use a hypothesis oriented, problem-solving approach to conduct an efficient, streamlined examination on patients with neurological dysfunction. Students will be able to demonstrate appropriate intervention strategies, applied across the continuum of care, following a synthesis of examination findings, the goals established, and the predicted outcomes. A strong emphasis is placed on developing the communications skills of the students with a focus on patient first language and motivational interviewing skills.

PT 773 Comprehensive Clinical Reasoning (4 credits)

Fall 2010 - present

This course is a case-based course taught in small tutorial groups (~ 6-7 students) using the problem-based learning format. The course is intended to enhance integration of course content taught elsewhere in the curriculum within the context of a physical therapy case study. Students will be expected to use a variety of resources including primary literature to solve complex patient cases. Issues to be discussed include evidence-based patient examination, clinical decision making, effective physical therapy intervention, likely prognosis, clinical teaching, the role of the PT in relation to other health care providers, issues involved in the delivery of physical therapy, including professionalism, interpersonal skills, communication, third party payers and ethics. In my role I am the primary instructor for a cohort of students and assist as needed to other cohorts. I

am the Neurologic Content Expert for the course which includes generating and updating any case element with neurologic dysfunction.

**PT 773 Comprehensive Clinical Reasoning/
Online Courses transitional DPT (2 credits)**

Fall and Spring 2011-2014

This course, taught in a problem-based learning format, gives students (~ 10-15) students the opportunity to work together using current literature to solve cases requiring clinical reasoning and analytical skills. Students will consider all areas of care including examination and treatment issues, reimbursement topics, psychosocial issues, reliable and valid examination techniques as well as best practice treatment programs. The final oral presentation occurs during a three day on-campus session at Boston University.

PT 515 Physical Therapy Examination (4 credits)

Summer 2010-2020

The emphasis of this course is to provide the students (~ 70-80 students) with the framework for the process of examination in physical therapy practice. It is an introductory course offered in the summer semester at the beginning of the professional program. The goal of the course is to enhance the students' ability to analyze movement, identify deviations from normal movement, formulate a hypothesis related to that movement disorder and introduce principles of examination that test that hypothesis. As an introductory course in the curriculum, it sets the stage for the development of clinical reasoning and synthesis of knowledge related to Human Anatomy and Movement. I assist in the lab portion of the course as the specialist in neurological systems and am responsible for advising and overseeing the application of key assessment skills such as analysis of movement and motor and sensory assessments with an emphasis on consistent application across all clinical courses in the DPT curriculum.

PT 555 Integrated Clinical Experience

Fall 2011

This is the first of two courses (~ 70-80 students) in the integrated clinical experience series. Using class discussion, standardized patients, community service opportunities and clinical observations, students will practice patient education strategies, appreciate the role of the physical therapist in relation to other health care providers, and apply skills related to professionalism, interpersonal skills and communication.

Instructional Compendium Contributing Author.....

I developed the following teaching materials that were published in a national teaching compendium titled *Patient Management: Examination and Intervention section of the Compendium for Teaching Professional Level Physical Therapy Neurologic Content, v. 2016*. The purpose of the Compendium is to provide examples of high-quality teaching and learning strategies that support the Neurologic Entry-Level Curricular Content Guidelines developed by the Academy of Neurologic Physical Therapy and is adopted by Doctor of Physical Therapy programs nationwide.

<https://www.neuropt.org/education/physical-therapy-educators/compendium/comp-docu>

| Title of Resource | Description |
|---|--|
| A Case Based Oral Practical Exam | The purpose of this oral practical examination is as an assessment of the student's ability to synthesize and apply all curricular content related to neurologic clinical practice through case development and presentation. |
| Self-Directed Interactive Learning Module | Development of interactive self-directed learning activities with branching technology for DPT students. The purpose of this activity is to promote clinical reasoning for the student using a case-based format to enhance and assess the student's application of didactic and lab-based instruction of skills outlined in the APTA Neurologic Entry-Level Curricular Content Guidelines |

Advisor/Mentor.....

PT 682/PT 782 Academic Practicum I and II (4 credits)

Fall 2009 to present

The Academic Practicum experience provides students (~ 1-6 students/varies by year) with the opportunity to apply and enhance their knowledge and skill while completing a more in depth and practical experience in one of four areas of their choosing: education, health promotion, clinical research or health care management. The experience also provides for refinement and development of skills and behaviors in a wide variety of collateral areas not immediately associated with the primary content area. Projects are initially developed during Academic Practicum I course and implemented and completed during Academic Practicum II. In my role I have mentored projects with a focus on neurologic dysfunction.

Mentored presentations/posters/projects.....

| Student | Project Title | Product |
|--------------------------------|--|--|
| 2022 | | |
| Sakuntala Nisha Bhandura | The role of Physical Therapy in the Management of X-Linked Adrenoleukodystrophy | Two 60-minute webinars provided virtually for families and individuals with X-Linked Adrenoleukodystrophy for <i>ALD Connect</i> , a non-profit organization that brings together patients, families, physicians, scientists, advocates, and industry. The topics presented were on the role of PT in the management of ALD, and a case example of how PT can positively impact the lives of individuals with ALD. |
| 2021 | | |
| *Christina Marinelli | High Intensity Interval Training (HIIT) for Individuals with Multiple Sclerosis | 90 min professional presentation provided virtually to DPT students at Boston University and at the APTA of Massachusetts Chapter Annual Conference |
| Emily Caitlin | Concussion education for non-contact athletes. | Development of a series of educational online modules provided through a virtual platform to collegiate club athletes with limited access to on site athletic training services. |
| 2020 | | |
| Lauren Boyle and Shirley Zhang | Concussion Management and Education for High School Hockey Athletes, Coaches and Parents | Development of an interactive web site designed to provide information on concussion and concussion management to community hockey coaches, players and parents with limited access to on site athletic training/healthcare support |
| Michael Muise | Benefits of Exercise for Individuals with Multiple Sclerosis. | Development of video exercise recommendations and examples for the Massachusetts Chapter of the MS Society web site |

| 2019 | | |
|-----------------------------------|--|--|
| *Michael Lopez and Jessica Printz | Food for Thought: How Nutrition can Facilitate Concussion Recovery. | Development and implementation of a 90 min professional presentation provided in person to DPT students at Boston University and at the APTA of Massachusetts Chapter Annual Conference |
| 2018 | | |
| *Rebecca Cheney and Erica Treske | Mindfulness Based Yoga Practice for Individuals with Chronic Brain Injury. | Development and implementation of a 90 min professional presentation provided in person to DPT students at Boston University and at the APTA of Massachusetts Chapter Annual Conference. Each student completed yoga instructor training with the "Love your Brain" organization. Each student also led a 6 week yoga course to individuals with brain injury. |
| Jack Malafronte | Sideline Management of Concussion for youth Football Coaches. | Development on 3-60 minute in-person lecture and lab based educational sessions focused on sideline assessment and decision-making for local youth football league coaches with limited access to on site athletic training/healthcare support. |
| 2016 | | |
| Blake Parsons and Maegan Maybach | Video Skill Tutorials for PT 652 Neurologic Systems I and PT 653 Neurologic Systems II. | Development and Integration of 15 videos demonstrating examination techniques for individuals with neurologic dysfunction. Videos are included as resources for DPT students in both core clinical neurologic courses. |
| *Lia Vann | Multimodal Physical Therapy Rehabilitation for the Management of Post-Concussion Syndrome in an Active Female Adult: A Case Study. | A retrospective case study of an individual with complex chronic concussion diagnosis. A peer reviewed poster was presented at APTA NEXT Conference in Boston, MA |
| Benita Daniels | Neurologic Physical Therapy Clinical Decision Making: Moderate Traumatic Brain Injury. | Development of an interactive self-guided learning module emphasizing clinical decision-making using Adobe Captivate for PT 653 Neurologic Systems II |
| George Padin | Neurologic Physical Therapy Clinical Decision Making: Concussion. | Development of an interactive self-guided learning module emphasizing clinical decision-making using Adobe Captivate for PT 653 Neurologic Systems II |
| Talya Hymann and Erica Alberto. | Adaptive Yoga for Individuals Post Stroke. | A series of videos of various yoga poses and routines adapted with an individual with a history of stroke were developed as a adapted exercise resource |
| 2015 | | |
| Mallory Gardner | Considerations for Patients with Eating Disorders for the Outpatient Physical Therapist. | Development of a 60 minute presentation provided to 2 local outpatient physical therapy clinics. |
| Brittany Toor | Neurologic Physical Therapy Clinical Decision Making: Guillain Barre Syndrome. | Development of an interactive self-guided learning module emphasizing clinical decision-making using Adobe Captivate for PT 653 Neurologic Systems II |

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|---------------------|--|--|
| Stephen Shevory | Neurologic Physical Therapy Clinical Decision Making: Parkinson Disease. | Development of an interactive self-guided learning module emphasizing clinical decision-making using Adobe Captivate for PT 653 Neurologic Systems II |
| Ryan Birchall | Differential Diagnosis and Benign Paroxysmal Positional vertigo (BPPV). | Sixty-minute lecture and lab on the topic of BPPV provided to 2 outpatient PT clinics. A visual model of the peripheral vestibular system was created to provide an enhanced learning experience |
| 2014 | | |
| Ruth Norwinda | Neurologic Physical Therapy Clinical Decision Making: Mild TBI. | Development of an interactive self-guided learning module emphasizing clinical decision-making using Adobe Captivate for PT 653 Neurologic Systems II |
| Robert Patterson | Differential Diagnosis and Benign Paroxysmal Positional vertigo (BPPV). | Development and implementation of a 60-minute lecture and lab on the topic of BPPV provided to 2 outpatient PT clinics. Quick reference visual resources were created and provided to clinics |
| 2013 | | |
| Hailey Beck | Neurologic Physical Therapy Clinical Decision Making: Multiple Sclerosis. | Development of an interactive self-guided learning module emphasizing clinical decision-making using Adobe Captivate for PT 653 Neurologic Systems II |
| Lisa Menendez | Neurologic Physical Therapy Clinical Decision Making: Stroke. | Development of an interactive self-guided learning module emphasizing clinical decision-making using Adobe Captivate for PT 653 Neurologic Systems II |
| 2012 | | |
| Amanda Langford | Exercise class for Individuals Post Stroke. | Development and implementation of a 6-session weekly balance exercise class. |
| TJ Snediker | Exercise class for Individuals with Parkinson Disease. | Development and implementation of a 6-session weekly balance exercise class. |
| 2011 | | |
| Paul Hartmann | Tai Chi class for individuals Post Stroke. | Development and implementation of a community based 6 session Tai chi class |
| Aiena Laya Bautista | Outcome Measurements: A Handout for Doctor of Physical Therapy Students revised. | Advanced Development and revision of a resource packet for the core clinical neurologic courses. Packet resources includes key outcome measures with a review of current psychometric properties of each measure for clinical use. |
| 2010 | | |
| Jonna Carroll | Outcome Measurements: A Handout for Doctor of Physical Therapy Students. | Development of a resource packet for the core clinical neurologic courses. Packet resources includes key outcome measures with a review of current psychometric properties of each measure for clinical use |
| Julie Baldenko | Balance and Mobility: A Post-Stroke Group Exercise Program. | Development and implementation of a 6 session weekly balance exercise class |
| Megan Kernan | Parameters for Body Weight Supported Treadmill Training in Patients Post Spinal Cord Injury. | Development of educational resources for local PT to improve application of intervention strategies |

| 2009 | | |
|--------------------|--|---|
| Michelle Stebbings | Community Based Functional Exercise class for individuals with Stroke. | Development and implementation of a 6 session weekly balance exercise class |

SERVICE TO THE PROFESSION

Committee Membership.....

| Committee | Year | Role | Description |
|--|--------------|--------------------------------|---|
| Invited Advisory Board, International Functional Electrical Stimulation Society | 2022 | Invited Member | Advise IFESS board on development of quality criteria requirements for international resource registry |
| American Board of Physical Therapy Specialties (ABPTS), Neurologic Specialty Council | 2022 | Chair | Coordinate and develop minimum eligibility requirements for certification and recertification in a specialty area based on ABPTS guidelines; screen applicants for eligibility to sit for exams and for recertification; conduct practice analysis research to define specialty area advanced clinical competencies, update Description of Specialty Practice, coordinate item writing workshops. Report to ABPTS and ANPT leadership |
| | 2018-2021 | Item Review Coordinator (IRC) | Coordinate exam development, direct supervision of CCEs, Screen applicants for eligibility to sit for the specialist certification exam. Report to Chair of Neurologic Council |
| | 2014-2017 | Committee Content Expert (CCE) | Lead a team of item writers. Provide instruction and guidance on item development. Report to IRC |
| | 2009-2013 | Item Writer | Subject matter expert. Develop and edit exam items for the neurologic specialization board examination. Report to CCE |
| ANPT Knowledge Translation Task Force | 2021-present | Member | Provide oversight and support of knowledge translation products for Use of AFO and FES post stroke CPG |
| Critical Appraisal Team | 2012-2014 | Member | Complete cortical appraisal of literature included in the Vestibular Rehabilitation for Peripheral Vestibular Hypofunction: An Evidenced-based Clinical Practice Guideline. JNPT. Vol (40). January 2013 - April 2016 |
| American Physical Therapy Association (APTA) Degenerative Diseases SIG (DD SIG) | 2012-2013 | Chair | Educational program planning for combined section meetings, Create educational resources and supports, help researchers, educators, and clinicians in the area of neurodegenerative disorders connect, share ideas, and learn from leaders in the field. |
| | 2010-2013 | Nominating Committee | |
| APTA of MA Neurologic Special Interest Group | 2015-2017 | Chair SIG | Created educational opportunities for neurologic physical therapists, created and supported board certification networking and study groups, facilitated networking opportunities and journal clubs. |

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|-----------------------------------|-----------|---------------------------------------|---|
| | 2011-2014 | Co-Chair SIG Steering Committee | Initiated creation of MA chapter Neurologic SIG. Created and submitted bylaws and completed approval process. Formed and supported initial board |
| APTA of MA Education Committee | 2014-2016 | Chair | Provided oversight and programming approval for APTA of MA Annual conference including review of poster, platform and educational submissions |
| | 2009-2014 | Member | |

Manuscript Reviewer.....

- 2021-present** Journal of NeuroEngineering and Rehabilitation
- 2020-present** Topics In Stroke Rehabilitation
- 2020-present** Complementary Therapies in Clinical Practice

SERVICE TO THE UNIVERSITY AND DEPARTMENT

University.....

- 2022-present** Faculty Council Alternate
- 2019-present** Educational Technologies Governance Committee Member

Department.....

- 2010-present** Chair: Physical Therapy Committee of Academic Policy and Procedures
- 2009-present** Graduate Student Advisor (> 12 DPT students)
- 2019-2020** Clinical Assistant Professor Search Committee Member
- 2010-present** Graduate Physical Therapy Admissions Committee
- 2009-2019** Neurology Task Force Committee Member
- 2010-2011** Neurologic DPT Residency Program Development Committee

COMMUNITY OUTREACH

- 2009** Partners Healthcare Health and Fitness Expo and Fall risk screenings
- 2009** Exercise and Parkinson Disease lecture. Jewish Family Community Center
- 2008** Falls Prevention Wellness Fair sponsored by APTA
- 2008** Benefit of Exercise and Physical Therapy for individuals with Parkinson's Disease
Pioneers of Recovery
- 2007** Falls Prevention Wellness Fair sponsored by APTA
- 2008** Falls Prevention Wellness Fair sponsored by APTA
- 2005-2008** "Don't get caught off balance" community lecture series provided to metro-west area senior centers, assisted living facilities, community centers, and "young at heart" groups

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

| | |
|---------------------|--|
| 2022-present | International Functional Electrical Stimulation Society |
| 2011-present | APTA of MA Neurologic Special Interest Group |
| 2009-present | APTA Vestibular Special Interest Group (SIG), Balance and Falls SIG, Spinal Cord Injury SIG, Stroke SIG, and Degenerative Diseases SIG |
| 2010-present | Academy of Physical Therapy Education |
| 2008-present | Academy of Neurologic Physical Therapy |
| 1990-present | American Physical Therapy Association (111029) American Physical Therapy Association Ma Chapter Member |