Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Program Mission Statement

To provide a post-professional clinical education experience that will accelerate and facilitate the attainment of advanced knowledge and skills in neurologic physical therapy to improve health, elevate hope, and advance healing – for all.

We seek to foster a growing body of skilled physical therapy providers that will elevate our entire clinical enterprise and the quality of rehabilitative services we provide to the community.
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Program Goals

Support the mission of Atrium Health and Wingate University by providing an organized educational opportunity that facilitates and accelerates excellence in neurologic physical therapy including evaluation, examination and progression of treatment interventions.

Provide a curriculum consistent with the Description of Specialty Practice (DSP) in neurologic physical therapy practice so that residents will be prepared to sit for the ABPTS (NCS) certification exam.
Offer a program that prepares physical therapists to better serve their organization and community as advanced direct access providers, clinical leaders and consultants/mentors for other clinicians.

Promote engagement in clinical research in order to advance the body of knowledge in neurologic physical therapy.

Encourage involvement in physical therapy professional organizations at the local, state and national levels in order to promote personal growth and development.
Resident Objectives

Demonstrate advanced evaluation and treatment skills in order to manage patients with neurologic diagnoses as described in the current Neurologic Physical Therapy Description of Specialty Practice.

Make referrals to appropriate health care professionals for further evaluation when appropriate.

Demonstrate professional behaviors consistent with the APTA professional standards, and standards of the educational and clinical organizations.
Routinely model the use of recommended tests and measures to efficiently assess the effectiveness of treatment interventions.

Lead journal reviews to foster the use of best practices as described in peer reviewed literature.

Prepare and present case reports to Advanced Care Practitioners PM&R residents and multi-disciplinary colleagues.

Mentor Doctorate of Physical Therapy students.
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Resident Objectives (Continued)

Participate in clinical and academic teaching.

Participate in community service projects which will enhance the health, hope and healing of individuals with neurologic dysfunction.

Participate in professional activities locally, nationally, or internationally through advocacy and attendance at professional meetings.

Demonstrate knowledge in the Knowledge Areas described in the current ABPTS DSP.

Demonstrate satisfactory performance of the Practice Expectations described in the current ABPTS DSP.
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Faculty Background

10 board-certified faculty in Neurologic Physical Therapy
3 board-certified faculty in Orthopedic Physical Therapy
5 faculty credentialed in advanced vestibular rehabilitation
Certification in LSVT BIG
Certified Wound Specialist
Certified Brain Injury Specialist
Certified Complete Decongestive Therapy for treatment of lymphedema
Certified Kinesio Taping Practitioners
Certifications in Dry Needling
Basic and Advanced APTA Certified Clinical Instructors
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Clinical and Didactic Faculty

Jacqueline LaBarbera PT, DPT, NCS
Melissa Davis PT, DPT, NCS
Ryan Medas PT, DPT, NCS
Erin C Weeks PT, DPT, CWS
Katie Williams PT, DPT
Jennifer Cline PT, MS
Alexis Williams PT, DPT, NCS
Jill NappiKaehler PT, DPT, NCS
Sara Bemenderfer PT, DPT, NCS

Rebecca Bliss PT, DPT, NCS
Diane Wrisley PT, Ph.D, NCS
B. James Massey PT, DPT, OCS, FAAOMPT
George Stephen Morris PT, PhD, FACSM
George Schuppin Ph.D
Mary Swiggum PT, PhD, PCS
Erin Jacobson, PT, DPT, OCS
Tyler Shultz, PT, DPT, OCS
Brett MacLennan, PT, DPT, OCS
Debbie Prouty, PT, EdD, GCS
Karen Friel, PT, DHS
Jacqueline LaBarbera

BS PT and Sports & Exercise Science, State University of New York at Buffalo
DPT, University of Montana
NCS – 2013
Basic and Advanced Vestibular Competencies – APTA
Dry Needling – American Academy of Manipulative Therapy
Spinal Cord Clinical Specialist – Carolinas Rehabilitation
James T. McDeavitt MD Teaching Award -2011
Duke University CI of the Year 2016
Interests: Yoga, paddle boarding, running and traveling with my husband and two dogs.
Atrium Health & Wingate University Physical Therapy Neurologic Residency Didactic Co-Director - Rebecca Bliss

BS, Ithaca College
MS PT, Ithaca College
DPT, Des Moines University, 2014
DHSc, University of Indianapolis, expected 2019
NCS - 2016
Certificate of Vestibular Rehabilitation, APTA
Impact Trained Physical Therapist
Neuro-Developmental Treatment of the Adult
Interests: running, travel and spending time with family
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Program Coordinator – Missy Davis

BS PT, UNC-CH 1991
DPT, The College of Saint Scholastica, 2016
NCS—2013
LSVT BIG® certification
APTA Basic and Advance Vestibular competency
Guest lecturer and part-time instructor at Central Piedmont Community College
Interests: Needlework, reading, gardening, & spending time with family and friends.
BA, NYU 1999
BSPT, SUNY Downstate 2007
DPT, SUNY Downstate 2009
NCS—2016
APTA Basic vestibular competency
Coordinator of SCI day program
Certified ReWalk trainer
Interests: Type II fun…like running to exhaustion. “Loves the unpredictable journey called life”
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Clinical Mentor—Erin Weeks

BS Exercise Science, Florida State University
MPT, UNC-CH
DPT, University of Montana
Certified Wound Specialist – 2013
Guest professor, UNC-CH & Wingate University
Interests: hiking, cooking, gardening, traveling, international missions work
Atrium Health & Wingate University Physical Therapy Neurologic Residency Clinical Mentor– Katie Williams

BA Exercise and Sports Science 2001 - UNC Chapel Hill
DPT 2005 - Boston University
ACBIS Certified Brain Injury Specialist

Professional Interests: Brain Injury, CVA, Parkinsons Disease, clinical research in TBI

Personal Interests: Running, exercise, enjoying the outdoors with my husband and our two children and watching as many Tar Heel games as possible.
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Clinical Mentor– Jen Cline

BS PT, Boston University
MS Anatomy, Case Western Reserve University
Credential Clinical Instructor Trainer from APTA
Clinical Associate Professor at Georgia State University 2010-2013
Interests: hiking, rafting, skiing, gardening, writing, and yoga
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Didactic Faculty – Diane Wrisley

BS PT, State University of New York at Buffalo
MS, Old Dominion University
Ph.D., University of Pittsburgh
Post-Doctoral Fellow, Neurological Sciences Institute
Oregon Health and Sciences University
Fellow, APTA Educational Leadership Institute
Professor, Wingate University
Director of Post-Professional Programs, Wingate University
Interests: quilting, travel, gardening and spending time with 3 Dachshunds
BS, Virginia Tech
MS, Virginia Tech
Ph.D., East Carolina Medical School
Associate Professor, Wingate University
Director of Human Anatomy Lab, Wingate University
Chair, Admissions Committee Doctorate of Physical Therapy Program, Wingate University
Interests: wood working, hiking with dogs and spending time with family
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Didactic Instructor—Mary Swiggum

BS PT, Boston University
MHS, University of Indianapolis
Ph.D., Texas Women’s University
PCS-1996 to current
Associate Professor, Wingate University
Chair, Curriculum Committee
Vice President, Queen City Trikes
AMBUCS-Research Advisory Committee
Interests: running, gardening, reading, animals
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Didactic Instructor—Stephen Morris

BS, University of Oklahoma
Ph.D., University of Texas at Austin
MS PT, Texas Woman’s University
Fellow of the American College of Sports Medicine
Professor, Wingate University
President, Oncology Section of the APTA
2016 Student Impact Award, Wingate University
Interests: cycling, travel and obscure facts
BS, Framingham State University
MS, Boston University
DPT, MGH Institute of Health Professions
Orthopedic Residency- University of Delaware
OCS- 2015
APTA Credentialed Clinical Instructor
Interests: home improvement, Spartan racing, golf, and spending time with his spouse and pets.
BS, University of Georgia
DPT, Medical College of Georgia
Orthopaedic Residency, Massachusetts General Hospital Institute of Health Professions
OCS- 2016
Assistant Professor, Wingate University
Bella J. May Award for Clinical Excellence
Interests: golf, bee keeping, spending time with family and dog Stella
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Didactic Instructor—James Massey

BA, North Carolina State University
DPT, University of North Carolina at Chapel Hill
Orthopedic Residency Brooks Rehabilitation
Fellow, Orthopedic Manual Therapy Duke University
Fellow, American Academy of Orthopaedic Physical Therapists
OCS-2013
Assistant Professor, Wingate University
Interests: hiking, tinkering on tractors, spending time with family
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Didactic Instructor—Erin Jacobson

BS, University of South Carolina, Exercise Science
DPT, University of South Carolina
Orthopedic Residency
OCS-2011
Certified in Dry Needling
Assistant Professor, Wingate University
Interests: reading, cooking and spending time with her family
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Didactic Instructor—Debbie Prouty

MS, University of Maryland, Physical Therapy
EdD, Argosy University
GCS
Assistant Professor, Wingate University
Interests: avid cycling and taking care of her 2 pot-bellied pigs
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Didactic Instructor—Karen Friel

BS, Stonybrook University
MS, University of Indianapolis
DHS, University of Indianapolis
Director of Wingate University’s Doctor of Physical Therapy Program
Professor, Wingate University
Interests: lacrosse, spending time with family
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Program Philosophy

The faculty and staff are committed to developing residents who are recognized leaders within their specialty area of neurological rehabilitation. Residents will develop excellence in examination, diagnosis, intervention, consultation, teaching and the integration of best evidence into the patient care they provide.

Graduates of the residency program will be prepared to sit for the ABPTS Neurologic Clinical Specialist (NCS) examination.
A minimum of 300 hours of didactic including faculty instruction and structured independent study

Assignments include written examinations, quizzes, Evidence-based Practice application and Oral and Written Case Reports

Mentored teaching in the DPT program, serving as lab assistants for Diagnosis and Management of Neurological Conditions I and II

Involvement in clinical and/or scientific research based on interest of the residents

Leadership development
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Curriculum Contents

Foundation of Neurologic Physical Therapy
Neuroanatomy, Neurophysiology, Neuroplasticity, Motor Learning, and Motor Control

Teaching and Learning in Neurological Physical Therapy

Medical Management in Neurological Physical Therapy
Pharmacology, Imaging, and Differential Diagnosis

Outcome Measures in Neurological Physical Therapy

Critical Inquiry

Expert Practice

Examination in Neurological Physical Therapy

Neurological Patient/Client Management

Neurological Intervention
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Required Textbooks


Fell, Lunnen, Rauk. Lifespan Neurorehabilitation. 2017 FA Davis


Physio U Web based application
Atrium Health & Wingate University Physical Therapy Neurologic Residency
Recommended Textbooks


Observational Gait Analysis. 2001. Rancho Los Amigos National Rehabilitation Center


Jensen et al., Educating Physical Therapists. 2018, Healio

Atrium Health & Wingate University  
Physical Therapy Neurologic Residency  
Clinical Program Overview

12 month duration – January to December  
32 hours/week patient care  
A minimum of 150 hours of 1:1 mentoring with faculty during patient care  
Shadowing with varied healthcare providers  
Independent readings, projects, and assignments
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Required Clinical Experiences

8 hours teaching (clinically and in DPT program)
20 hours community service
4 hours shadow with Advanced Care Practitioner
4 hours professional leadership project/quality improvement
4 hours mentorship with APTA certified CI
10 hours exposure to clinical research
Abstract submission to NCAPTA annual fall conference
Professional Organization Participation
Facilitation of Inpatient Rehabilitation Student Journal Club
Presentation of two patient case reports through the Center for Advanced Practice and with PM&R medical residents
End of the year presentation of professional portfolio and CQI project
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Specialty Experiences – Acute Care

- Neurotrauma ICU
- Surgical/Trauma ICU
- Progressive Unit/Step Down
- Neuroimaging – Neurology
- Nerve Conduction Studies and EMG
- Lumbar Drainage Trial
- L.E.A.N Rounding
- Surgery Observation
- Pediatric/NICU Observation
Atrium Health & Wingate University Physical Therapy Neurologic Residency Specialty Experiences – Acute Care/IRF

Multi-disciplinary treatment teams – SLP, PM&R, RN/CNA, OT, TR

Respiratory Therapy - ventilator management

Pharmacology

Referral/Liaison screening
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Specialty Experiences - Inpatient Rehabilitation

Rotations through: Oncology, Spinal Cord Injury and Traumatic Brain Injury teams
Interdisciplinary treatment conferences
Seating and Mobility Clinic
Wound care
Emerging Responsive Program
Neuro-behavioral Unit/Non-violent crisis intervention
Group treatments
Community Outings/Home Assessments
TBI and SCI Patient Education Series
Atrium Health & Wingate University Physical Therapy Neurologic Residency Specialty Experiences – Inpatient/Outpatient Rehabilitation

- Aquatics
- Community Support Groups: TBI/CVA/Amputee/SCI
- Balance and fall prevention
- Exposure to ST/OT cognitive rehabilitation
- Functional Electric Stimulation Cycle/XCITE/ Bioness BITS
- Lokomat/ GEO
- Lite Gait/ Ceiling Track
- Vestibular assessment and intervention
- Exposure to inpatient/outpatient pediatrics
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Specialty Experiences – Outpatient Rehabilitation

Prosthetics training
Orthotics/prosthetics clinic
ALS, MD, SCI, BI, Stroke and Post-Polio clinics
Driving evaluations
TBI/CVA/Amputee/SCI
Computerized dynamic posturography
Neuropsychology
Outpatient TBI and SCI (L.I.F.E) day programs
Demonstrates a commitment to learning including:

- Is prepared for each learning experience, meets all deadlines, consistently punctual, asks well-formulated questions, and invites feedback to facilitate problem solving and learning.
## Mentor and Mentee Responsibilities

<table>
<thead>
<tr>
<th>MENTOR</th>
<th>MENTEE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commits to mentoring</td>
<td>Commits to learning – prepares for mentoring sessions</td>
</tr>
<tr>
<td>Sets expectations appropriate to mentee’s stage of development</td>
<td>Provides feedback to mentor on comfort with expectations</td>
</tr>
<tr>
<td>Provides resources, experts and source materials</td>
<td>Takes initiative to maximize learning opportunities</td>
</tr>
<tr>
<td>Offers guidance and direction regarding professional issues</td>
<td>Sees the relationship between personal and professional growth</td>
</tr>
<tr>
<td>Encourages and acknowledges mentees ideas and professional contributions</td>
<td>Is willing and confident to try new things</td>
</tr>
<tr>
<td>Provides constructive and useful critiques and strategies for change</td>
<td>Routinely self-reflects as a springboard to improved performance</td>
</tr>
</tbody>
</table>
Atrium Health & Wingate University  
Physical Therapy Neurologic Residency  
Mentor and Mentee Responsibilities (Continued)

<table>
<thead>
<tr>
<th>MENTOR</th>
<th>MENTEE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Challenges the mentee to expand abilities</td>
<td>Active learner</td>
</tr>
<tr>
<td></td>
<td>Extrapolates KSAs to novel contexts</td>
</tr>
<tr>
<td></td>
<td>Synthesizes KSAs with each other</td>
</tr>
<tr>
<td>Provides timely, clear and comprehensive feedback on performance and</td>
<td>Accepts feedback and makes changes as</td>
</tr>
<tr>
<td>development</td>
<td>applicable</td>
</tr>
<tr>
<td></td>
<td>Takes on leadership roles and is willing to</td>
</tr>
<tr>
<td></td>
<td>act independently</td>
</tr>
<tr>
<td>Respects and fosters mentee’s independence, creativity and uniqueness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Has a high job investment</td>
</tr>
<tr>
<td>Shares with mentee success and benefits of products and activities</td>
<td></td>
</tr>
</tbody>
</table>
Ability to think about thinking
Ability to be critically self-aware
Ability to self-regulate and monitor one’s thinking and action
Ability to learn from mistakes
Ability to actively participate in Transformative Learning - shifting thoughts and actions
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Proposed Domains of Competency for Developing PT Residents

- Communication
- Clinical Reasoning
- Education
- Systems-Based Practice
- Knowledge of Practice
- Patient Management

Professionalism
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Resident Evaluation

APTA Core Competencies for Residents
  Self Assessment – complete at start and completion of residency
  Mentor Assessment – completed at end of each rotation

Weekly Feedback Forms
  Clinical Mentor Prep Form – completed by resident prior to mentor sessions
  Mentor Feedback Form – completed by mentor following mentor session

Clinical Skills Performance/ Live Patient Examination – 2 per rotation (6 total):
  Clinical Skills Performance Evaluation Tools for PTs

Case Presentation Rubric
  Completed by faculty and resident peers after each case presentation
Weekly Reflection Posting

Presentation of two patient case reports
  Center for Advanced Practice
  PM&R medical resident meeting

Professional Leadership Project/ Quality Improvement Project

Professional portfolio

Abstract submission to NCAPTA fall conference
"Even after 6 years of practice, this residency has enabled me to grow tremendously as a neurologic physical therapist and has given me the confidence and preparation needed to take the NCS."

- AH 2017 Cohort

"The experiences and connections I made during this residency have infinitely improved the quality of care I can now provide to my patients, especially the most challenging patients. Having the opportunity to spend a year focusing on perfecting my skills, diving into the research, and learning from so many experts was worth every minute of stress along the way."

- KS 2017 Cohort

"This year has given me the clinical experience necessary to feel comfortable to walk into any physical therapy department, in any setting, and feel comfortable being able to treat any patient with a neurologic diagnosis."

- SB 2017 Cohort
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Resident Feedback

“I have been challenged to clinically reason at a higher level and have been exposed to not only a wide variety, but increased complexity of patient presentations. I have grown as a clinician and felt so supported by the amazing mentorship of experts in the field across the care continuum. I feel more comfortable and confident in organizing care for patients with neurological diagnosis and advocating for patient needs with members of the multi-disciplinary team. This has been a year of growth and I would absolutely do it again! – JH 2018

“This residency program has challenged me in ways that have greatly improved my professional and personal development. During my time I was exposed to a wide variety of patients throughout the continuum of care in a dynamic, but supportive environment. I feel like I have condensed at least 5 years of growth into just one year.” – CC 2018

“The residency has allowed me to expedite personal and professional growth within the physical therapy profession.” – ER 2018
Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Resident NCS Exam Pass Rate

100%