

A person wearing a grey lab coat and a safety harness is standing on a white robotic gait trainer. They are holding onto the handrails. Two other people, a woman in a black top and another in a blue top, are standing nearby, observing the person on the machine. The setting appears to be a modern clinical or research facility with large windows in the background. The entire image has a teal overlay.

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.

Atrium Health & Wingate University Physical Therapy Neurologic Residency Program Goals (Continued)

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.

Atrium Health & Wingate University

Physical Therapy Neurologic Residency

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.

Atrium Health & Wingate University Physical Therapy Neurologic Residency Resident Objectives (Continued)

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

Atrium Health & Wingate University Physical Therapy Neurologic Residency Clinical Co-Director – 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.



Atrium Health & Wingate University Physical Therapy Neurologic Residency Clinical Mentor— Ryan Medas

BA, NYU 1999

BSPT, SUNY Downstate 2007

DPT, SUNY Downstate 2009

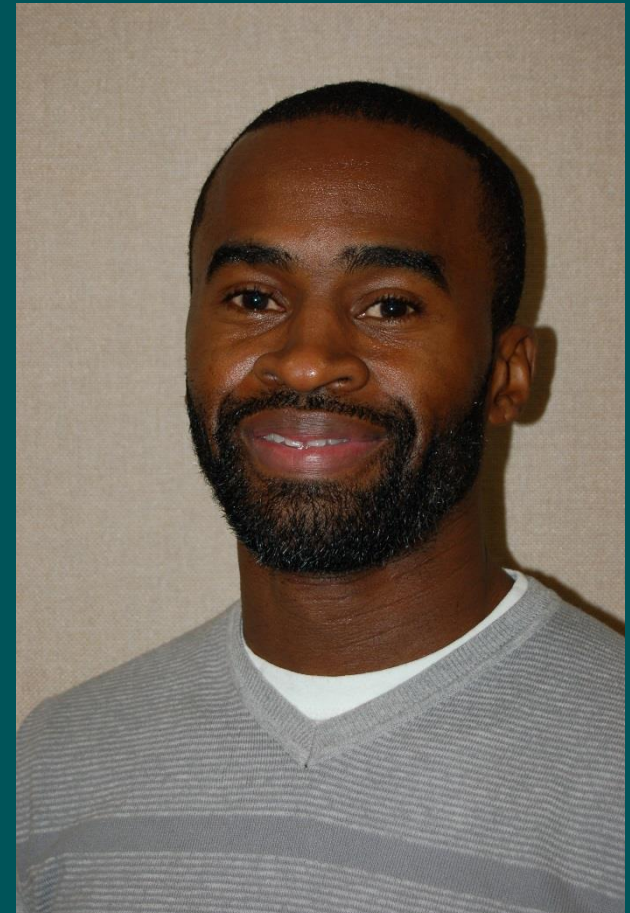
NCS—2016

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
NCS –1996-2016, Emeritus 2016
Interests: quilting, travel, gardening and spending
time with 3 Dachshunds



Atrium Health & Wingate University Physical Therapy Neurologic Residency Didactic Instructor– George Schuppin

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



Atrium Health & Wingate University Physical Therapy Neurologic Residency Didactic Instructor– Brett MacLennan

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.



Atrium Health & Wingate University Physical Therapy Neurologic Residency Didactic Instructor– Tyler Shultz

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.

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

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

Umphred, Lasaro, Roller, and Burton. *Neurological Rehabilitation*. 6th edition. 2012. Mosby.

Blumenfeld. *Neuroanatomy through Clinical Cases*. 2nd Edition. 2010. Sinauer Associates, Inc. Sunderland, MA.

Lundy-Ekman. *Neuroscience: Fundamentals for Rehabilitation*. 5th Edition. 2018. Elsevier Saunders, St Louis, MO.

Shumway-Cook and Woollacott. *Motor Control: Translating Research into Clinical Practice*. 4th Edition. 2012. Lippincott Williams and Wilkins, Baltimore, MD

O'Sullivan, and Schmitz. *Improving Functional Outcomes in Physical Rehabilitation*. 2nd Edition. 2016. FA Davis.

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

Fetters and Tilson. *Evidence-based Physical Therapy*. 2019. FA Davis.

Physio U Web based application

Atrium Health & Wingate University Physical Therapy Neurologic Residency Recommended Textbooks

Ciccone. *Pharmacology in Rehabilitation*. 5th Edition. 2016.
FA Davis.

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

Portney and Watkins. *Foundations of Clinical Research:
Applications to Practice*. 3rd Edition. 2009. Prentice Hall.

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

McEwen. *Writing Case Reports: A How-to Manual for
Clinicians*. 3rd Edition. 2009. APTA, Alexandria, VA.

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

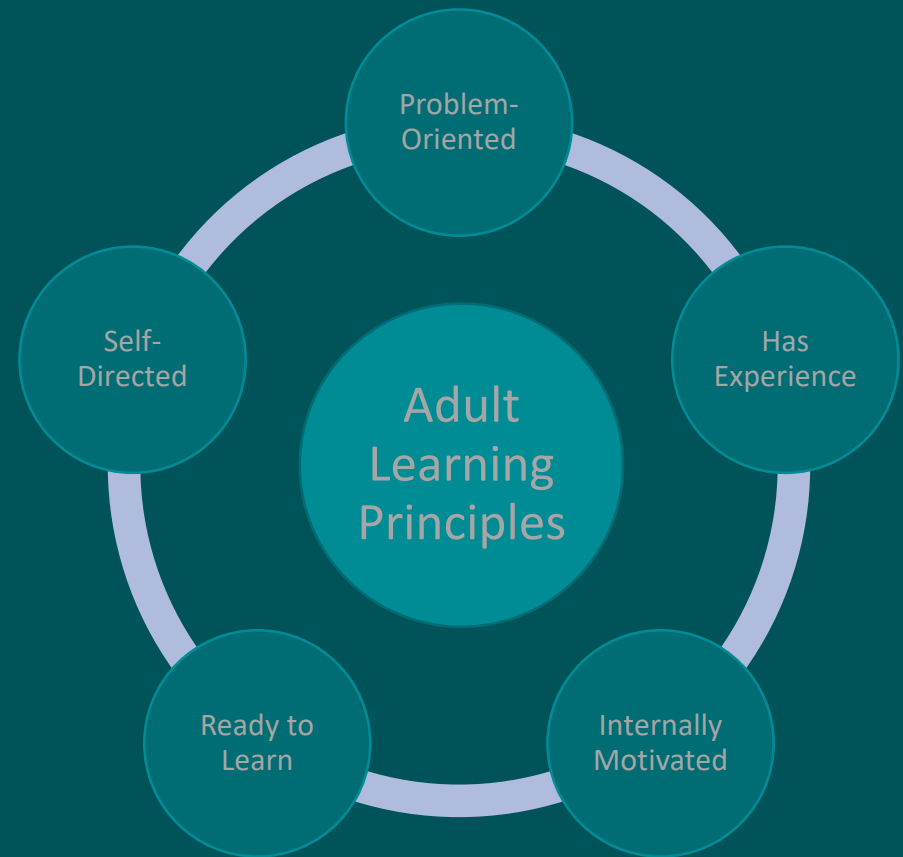
Computerized dynamic posturography

Neuropsychology

Outpatient TBI and SCI (L.I.F.E) day programs

Atrium Health & Wingate University Physical Therapy Neurologic Residency Resident Responsibilities

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



Atrium Health & Wingate University Physical Therapy Neurologic Residency Mentor and Mentee Responsibilities

MENTOR	MENTEE
Commits to mentoring	Commits to learning – prepares for mentoring sessions
Sets expectations appropriate to mentee’s stage of development	Provides feedback to mentor on comfort with expectations
Provides resources, experts and source materials	Takes initiative to maximize learning opportunities
Offers guidance and direction regarding professional issues	Sees the relationship between personal and professional growth
Encourages and acknowledges mentees ideas and professional contributions	Is willing and confident to try new things
Provides constructive and useful critiques and strategies for change	Routinely self-reflects as a springboard to improved performance

Atrium Health & Wingate University Physical Therapy Neurologic Residency Mentor and Mentee Responsibilities (Continued)

MENTOR	MENTEE
Challenges the mentee to expand abilities	Active learner Extrapolates KSAs to novel contexts Synthesizes KSAs with each other
Provides timely, clear and comprehensive feedback on performance and development	Accepts feedback and makes changes as applicable
Respects and fosters mentee's independence, creativity and uniqueness	Takes on leadership roles and is willing to act independently
Shares with mentee success and benefits of products and activities	Has a high job investment

Atrium Health & Wingate University Physical Therapy Neurologic Residency Metacognition – “*Getting the inside out*”

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



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

Atrium Health & Wingate University Physical Therapy Neurologic Residency Clinical Assignments

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

Atrium Health & Wingate University Physical Therapy Neurologic Residency Resident Feedback

"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*



ABPTRFE
ACCREDITED PROGRAM

Atrium Health & Wingate University
Physical Therapy Neurologic Residency
Resident NCS Exam Pass Rate

100%