

Curriculum Vitae

Assistant Professor

Heather Anne Hayes, DPT, PhD, CSRS
Board-Certified Neurologic Clinical Specialist

University of Utah

College of Health, Department of Physical Therapy and Athletic Training

School of Medicine, Division of Physical Medicine and Rehab

Balance and Mobility Clinic

Residency Director, Utah Neurologic Physical Therapy Residency Program

520 Wakara Way, Suite 302, Salt Lake City, UT 84108-1213

Direct phone 801-587-9249, Clinic phone 801-587-9161, Fax 801-587-7607

Email. Heather.hayes@hsc.utah.edu

I. EDUCATION:

- 01/2017 – 12/2018 **Vice President's Clinical and Translation Scholars Program**
- 08/2007 – 5/2014 **University of Utah, Salt Lake City**
PhD, Exercise and Sports Science
Faculty Mentor: Lee Dibble, PT, PhD; Committee: Barry Shultz, PhD (ESS chair); Andrea White, PhD (ESS); Thomas Schenkenberg, PhD (Neurology); Lara Boyd, PT, PhD (Vancouver, CANADA)
- 08/2000 – 05/2003 **Northern Arizona University (NAU), Flagstaff, Arizona**
Doctor of Physical Therapy-with distinction
- 08/1992 – 05/1994 **University of Colorado at Boulder, Boulder, Colorado**
Fulfilled pre-requisite coursework for enrollment in a Physical Therapy program.
- 08/1986 – 05/1990 **Tulane University, Newcomb College, New Orleans, Louisiana**
Bachelor of Arts -International Relations
Minor -Dance
- 08/1988 – 05/1989 **University of Kent, Canterbury, England**
Honors Program Tulane-Newcomb Junior Year Abroad

II. LICENSURE INFORMATION AND CERTIFICATIONS:

- 05/2004 – present Physical Therapy Utah state license, 5608794-240
- 01/2019 – present Certified Stroke Rehabilitation Specialist
- 06/2006 – present Neurologic Clinical Specialist, ABPTS certification 2006, recertified 2016
- 10/2004 – present APTA certified clinical instructor
- 01/2004 – present Saebo, Inc. certified orthotist-for fitting of specialized hand orthosis
- 01/1999 – present Basic Life Support

III. EMPLOYMENT:

Academic:

- 05/2004 – present University of Utah, Salt Lake City, Utah
Department of Physical Therapy and Athletic Training
Division of Physical Medicine and Rehab
Assistant Clinical Professor

Clinical:

05/2004 – present University of Utah, Salt Lake City, Utah
Balance and Mobility Clinic

- An outpatient clinic focusing on neurological disabilities and wellness programs for MS, Parkinsonism, stroke, TBI and SCI.
- Clinical instructor for doctor of physical therapy students overseeing research projects, clinical experiences, seminar teaching.
- ALS multidisciplinary clinic providing physical therapy services for individuals with ALS.
- Coordinate an intensive 10-day therapy program, including constraint-induced therapy for individuals with focal neurological injuries.
- Researcher focused on improvement in stroke rehabilitation services.

05/2009 – present Utah Neurologic Physical Therapy Residency Program, Resident
Director APTA credentialed site.

IV. PROFESSIONAL AFFILIATIONS:

Membership, National Positions, and Committees:

American Congress of Rehabilitation Medicine (ACRM)

2018, member
Stroke special interest group member
Health Services interest group member

American Physical Therapy Association (APTA)

2000, member
Academy of Neurologic Physical Therapy (ANPT) 2003-current, member
ANPT, Stroke Special Interest Group (SIG), 2003-current, member
ANPT, Chair, Stroke SIG, 2015-2020
ANPT, Program Committee for IV Step Programming, 2014-2016
ANPT, Member Practice Committee, 2006-2013
ANPT, Stroke SIG, nominating committee 2013-2016
ANPT, Advocacy committee member 2009-2010
ANPT, Program Committee for III Step programming, 2006-2007
ANPT, Membership Committee liaison, 2005-2006

American Heart/Stroke Association

Stroke Task Force, Western States Affiliate, 2013-2015
UT Stroke Task Force, President Rehabilitation Committee 2006-2013
Utah Heart/stroke walk, event coordinator for Stroke Awareness 2013-2017
Leadership forum, volunteer April 2013

Utah Physical Therapy Association

2004-current, member

V. PEER REVIEWED PUBLICATIONS:

Complete List of Published Work in MyBibliography

<https://www.ncbi.nlm.nih.gov/myncbi/browse/collection/43384654/?sort=date&direction=ascending>

Hayes HA, Hu N, Wang X, Gibson S, Mathy P, Berggren K, Bromberg M. Comparison of Driving Capacity Among Patients with Amyotrophic Lateral Sclerosis and Healthy Controls Using the Lane Change Task. *Amyotrophic Lateral Sclerosis & Frontotemporal Degeneration*. In review.

Pucillo EM, McIntyre MM, Pautler M, Hung M, Bounsanga J, Voss MW, **Hayes HA**, Dibella DL, Trujillo C, dixon M, Butterfield RJ, Johnson NE. The modified Dynamic Gait Index and Limits of Stability in Myotonic Dystrophy type 1. *Muscle Nerve*. 2018 Aug 30; epub.

Hayes HA, George S, Dibble LE. Increased Practice of a Standing Motor Sequence Task in Healthy Young and Healthy Elders: Short Communication. *Gait & Posture*. 2018;63:1-4.

Hayes HA et al. Stepping Activity in Children With Congenital Myotonic Dystrophy. *Pediatric Physical Therapy*. 2018;30(4): 335-339.

George S, **Hayes HA**. The Influence of Cognition in Implicit Motor Sequence Performance in Persons with Stroke. *Undergraduate Research Journal*. [S.l.], June 2017. Available at: <<http://epubs.utah.edu/index.php/URJ/article/view/3628>>. Date accessed 2017, August 22.

Kloos A, Carey H, Fernandez J, McCarthy A, Le Cras S, Moore J, Miles C, McCain K, Stoeckmann T, Snowdon L, **Hayes HA**, Ellis T, Kobal K [Facilitators]. Video-based Case Presentations and Discussion Exploring Adult (TBI, CVA, SCI, MS, PD, CNS Neoplasms) and Pediatric (CP, TBI, DS, MD, DCD). Facilitated at: IV STEP Conference Proceedings 2016: Prevention, Prediction, Plasticity, and Participation; July, 2017; Alexandria, VA.

Johnson NE, Butterfield R, Berggren K, et al. Disease burden and functional outcomes in congenital myotonic dystrophy: A cross-sectional study. *Neurology*. 2016;87(2):160-167.

Howell AM, Kobayashi T, **Hayes HA**, Foreman KB, Bamberg SJ. Kinetic Gait Analysis Using a Low-Cost Insole. *IEEE transactions on bio-medical engineering*. 2013;60(12):3284-3290.

Hayes HA, Hunsaker N, Schaefer SY, et al. Does Dopamine Replacement Medication Affect Postural Sequence Learning in Parkinson Disease? *Motor control*. 2015(19):325-340.

Hayes HA, Hunsaker N, Dibble LE. Implicit motor sequence learning in individuals with Parkinson disease: A meta-analysis. *Journal of Parkinson's Disease*. 2015;(5)549-560.

Hayes HA, Gappmaier E, LaStayo PC. Effects of high-intensity resistance training on strength, mobility, balance, and fatigue in individuals with multiple sclerosis: a randomized controlled trial. *Journal of Neurologic Physical Therapy*. 2011;35(1):2-10.

Cormack J, Gobert D, Hardage J, **Hayes HA**, et al. Perspective From the Practice Committee: Is Autonomous Practice in Neurologic Physical Therapy Defined Differently Based on the Type of Practice Setting? *Journal of Neurologic Physical Therapy*. 2010;(34)1-2.

Hayes HA, Gappmaier E, Dibble LE, LaStayo PC. Safety and feasibility of a high intensity resistance training program for individuals with Multiple Sclerosis. *Multiple Sclerosis*. 2008;14(1);S142.

Hayes HA, Gappmaier E, Dibble LE, LaStayo PC. Effects of a high intensity resistance training program on strength, mobility and fatigue in moderately severe individuals with Multiple Sclerosis. *Multiple Sclerosis*. 2008;14(1);S142.

VI. PEER REVIEWED SCIENTIFIC AND PROFESSIONAL PRESENTATIONS:

Wells S, **Hayes HA**. Characteristics of fallers and non-fallers after an inpatient rehab facility stay. [Abstract]. Utah Physical Therapy Association Fall Conference; Nov, 2018; Salt Lake City, UT.

Hayes HA. APTA CSM Neurology Section, February 2014. Presentation. "The Effects of Age and Parkinson's Disease on Temporal and Spatial Learning During a Posturally Demanding Implicit Motor Sequence Task".

Hayes HA. Society for Neuroscience. November 2013. Presentation "The effects of age and Parkinson disease on performance and learning of an standing implicit motor sequence task".

Hayes HA. APTA Annual Conference, June 2006. "Activity and participation gains following a unique intensive rehabilitation program for a person with chronic stroke."

Hayes HA. APTA CSM Neurology Section, February 2004. "Resistance Training via Lengthening Contractions for Individuals with MS: A Preliminary Report."

VII. PEER REVIEWED POSTER PRESENTATIONS:

Watkins M, **Hayes HA**. Cutting cucumbers and riding bikes: The impact of participant-selected activities on psychosocial and mobility outcomes. APTA Combined Sections Meeting, New Orleans, LA, February 2018.

Walter S, Schaefer SY, Dibble LE, **Hayes HA**, Watson JM, Richards LG. Priming Error Detection to Augment Learning of a Motor Task: A Proof-of-Principle Study. American Society of Neurologic Rehabilitation. November 2017.

George S, **Hayes HA**. Implicit motor sequence learning in persons with stroke compared to healthy young and healthy elder. Research on Capitol Hill. January 2017

George S, **Hayes HA**. Implicit Motor Sequence Learning in Persons with Stroke and the role of cognition. National Conference of Undergraduate research. February 2017.

Fechter B, **Hayes HA**, Abraham C, Godfrey N, Bamberg S. Integration of Health Information Technology in the Clinic for Assessment and Intervention, a Case Study. APTA Combined Sections Meeting, San Antonio, TX, February 2017.

George S, **Hayes HA**. Influence of cognition in implicit motor sequence learning in persons with stroke. University of Utah, Undergraduate Research Symposium. 2016.

Pautler M, **Hayes HA**, Trujillo C, Dibella D, Pusillo E, Butterfield R, Johnson N. Limits of Postural Stability in Myotonic Dystrophy compared to normative values. Muscle Study Group 2016. Snowbird, UT.

Hayes HA, Anderson D, Gibson S, Mathy P, Berggren K, Bromberg M. Comparison of Driving Capacity with Distraction Using the Lane Change Task in Drivers with Amyotrophic Lateral

Sclerosis Compared with Healthy Controls. 27th International Symposium on ALS/MND. Dublin, Ireland. December 9, 2016. Short listed clinical poster award.

Hayes HA, Schaefer S, Dibble LE. The Feasibility and Efficacy of a Postural Continuous Tracking Task: Exploring the Dosing of Postural Task Practice in Parkinson Disease. IV Step Conference, Academy of Neurologic Physical Therapy. Columbus, OH July 2016.

Johnson N, Hung M, Dixon M, Dibella D, Pusilo E, Berggren K, **Hayes HA**, Chen W, Butterfield R, Heatwole C, Campbell C. Disease burden and functional outcomes in Congenital Myotonic Dystrophy: A cross-sectional study. American Academy of Neurology, 2016.

Hayes HA, Dorius N, Gibson S, Mathy P, Bergerren K, Bromberg M. Comparison of Driving Capacity with Distraction Using the Lane Change Task in Drivers with Amyotrophic Lateral Sclerosis Compared with Healthy Controls. American Academy of Neurology, 2016.

Pucilo E, **Hayes HA**, Dibella D, Johnson N, Butterfield R, Hung M, Chen W, Crockett B, Dixon M, Bounsanga J, Campbell C. A Comparison of Six-Minute Walk Test Performance between children with Congenital Myotonic Dystrophy (CDM) and Healthy Controls. Muscle Study Group 2015 September.

Dibella D, **Hayes HA**, Hung M, Chen W, Chen W, Crockett B, Pusilo E, Dixon M, Butterfield R, Bounsanga J, Johnson N, Campbell C. Feasibility and Reliability of the 2-Minute Walk Test and 6-Minute Walk Test in Children with Congenital Myotonic Dystrophy. Muscle Study Group 2015 September.

Pautler M, **Hayes HA**, Trujillo C, Dibella D, Pusilo E, Dixon M, Butterfield R, Johnson N. Feasibility of assessing muscle strength and physiological fatigue in adults with Myotonic Dystrophy, preliminary results. Muscle Study Group 2015 September.

Fechter B, **Hayes HA**. Functional Electrical Stimulation to Assist Equinovarus Deformity during Gait for a Patient with a foot Dystonia: A Case Study. APTA Combined Sections, February 2015.

Fechter B, **Hayes HA**. Impairment Training of Left Homonymous Hemianopsia and Hemi Visual Neglect for Returning to Driving, a Case Study. Utah Physical Therapy Association Fall meeting. October 11, 2014.

Hunsaker N, **Hayes HA**. Extended practice effects on implicit motor sequence learning in Parkinson disease and healthy controls. Utah Physical Therapy Association Fall meeting. October 11, 2014.

Hayes HA. Neuromuscular disease. Assessment of Six-Minute Walk Test in Children with Congenital Myotonic Dystrophy: Preliminary Results. Muscle Study Group, September 23, 2014.

Hayes HA. Testing the Dopamine-Overdose Hypothesis on Implicit Motor Sequence Learning in Parkinson Disease. CSM 2014, research section APTA.

Hayes HA, Dibble LE. The effects of age and Parkinson disease on performance and learning of an environmentally valid implicit motor sequence task. International Congress of Parkinson's Disease and Movement Disorders. June 2013.

Hayes HA, Stephens, M. Functional improvements for individuals with chronic stroke using two intensive training programs”. Center on Aging conference February 22, 2011. University of Utah.

Stephens M, **Hayes HA**. Determining improvements of gait characteristics in individuals with chronic stroke based on two intensive training programs. Center on Aging conference February 22, 2011. University of Utah.

Hayes HA, Stephens M. Functional improvements for individuals with chronic stroke using two intensive training programs. Preliminary Results. 2011 APTA Combined Sections Meeting, February, 2011. New Orleans, LA.

Stephens M, **Hayes HA**. Determining improvements of functional ambulation; gait speed, quality, and community accessibility for individuals with chronic stroke by providing two intensive training programs, preliminary results. 2011 APTA Combined Sections Meeting, February, 2011. New Orleans, LA.

Hayes HA, Dibble LE. Asymmetrical contribution of sarcopenia to functional mobility in persons with chronic stroke. APTA Combined Sections Meeting in Las Vegas, NV February 9-12, 2009.

Hayes, HA, Cavanaugh, J, Dibble LE. Relationship between physical performance and ambulatory activity in individuals with chronic stroke. APTA Combined Sections Meeting in Las Vegas, NV February 9-12, 2009

Hayes, HA, Dibble LE, LaStayo, P. Effects of a high intensity eccentric resistance training program on strength and muscle endurance of individuals with multiple sclerosis (MS)." Presenter, Gappmaier. APTA Combined Sections Meeting in Las Vegas, NV February 9-12, 2009.

Hayes, HA, Gappmaier, E, Dibble LE, LaStayo, PC. Safety and feasibility of a high intensity resistance training program for individuals with MS. ACTRIMS Montreal, September 18, 2008.

Hayes HA, Gappmaier E, Dibble LE, LaStayo PC. Effects of a high intensity resistance training program on strength, mobility and fatigue in moderately severe individuals with Multiple Sclerosis. ACTRIMS Montreal, September 18, 2008.

Hayes HA, Whetten B. Participation gains following unique intensive rehabilitation for persons with chronic stroke. Center on Aging, University of Utah, April 2007.

Mehler A, Hale T, Foreman KB, **Hayes HA**, LaStayo P, Dibble L. Differences in anticipatory postural adjustments between fallers and non-fallers in persons with Multiple Sclerosis.” Published in Journal of Neurological Physical Therapy, December 2007. APTA Combined Sections Meeting, February 2008.

Dibble LE, Foreman KD, **Hayes HA**. Tracking the natural history of mobility loss in neurodegenerative diseases: Preliminary results using an on-line database tracking system. Published in Journal of Neurologic Physical Therapy, December 2006. APTA Combined Sections Meeting, Boston, MA, February 2007.

VIII. SCHOLARLY ACTIVITIES/PRESENTATIONS:

Case series presentations, *Individuals with MS, applying principles of plasticity, outcome assessment, movement system diagnoses, prevention, and participation*. IV Step conference.

Academy of Neurologic Physical Therapy. Columbus, OH July 2016.

ISC Junior Investigator Grant Proposal Accepted for Platform. *Assessment of BDNF Genotype and Activity Level on Functional Gains in Individuals with Stroke in Post-Acute Care*. October 2014.

Utah Stroke Symposium, University of Utah Guest House, May 17, 2014. *Wellness for Stroke Survivors, Case Study of PT and SLP*.

Geriatric Grand Rounds, University of Utah, March 4, 2014. *Physical Therapy Assessment of Gait and Balance and Recommendations for Assistive Devices*.

University of Utah, Research in progress, *The effects of age and Parkinson disease on performance and learning of an standing implicit motor sequence task*, Fall 2013.

Stroke Symposium Idaho. Keynote speaker. *Current concepts in rehabilitation of stroke across the continuum of care*. February 24, 2012.

APTA Neurology Section Practice Committee, speaker for Practice Issues Forum. *The Art of Documentation: Effective and Clear Documentation of Non-Traditional Therapeutic Activities*. CSM, Chicago, February 2012.

American Academy of Orthotists and Prosthetists, One day seminar. *The Effect of AFO's on balance: Balance Deficits Associated with Acute and Chronic Stroke*. Chicago, October 2011.

APTA Neurology Section Practice Committee, speaker for Practice Issues Forum. *Evidence based practice and practice based evidence*. CSM, New Orleans, February 2011.

UTPTA Annual Fall meeting. *Determining improvements in body structure and function, activity, and participation in individuals with chronic stroke by providing two intensive treadmill training programs*. Stephens, M. Hayes, HA. Platform presentation, presented by Stephens, M. October 2010.

APTA Neurology Section Practice Committee, speaker for Practice Issues Forum. *Lifelong learning*. CSM, San Diego, February 2010.

APTA Neurology Section, Practice Committee, Coordinator of Practice Issues Forum. *Neurologic Educational Guidelines*. CSM, February 2009.

Utah Physical Therapy Association, Fall State conference. *Intensity and stroke rehabilitation*. October 2009.

Traumatic Brain Injury conference. *The role of a physical therapist*. Utah October 2009.

APTA, Neurology Section, Practice Committee, Coordinator of Practice Issues Forum. *Autonomous Practice*. CSM, February 2008.

KUED Guest presenter. *Stroke and Perspectives on Caregiving*. KUED special funded by Utah Stroke Association. June 2007.

UT Stroke Symposium, Stroke task force moderator and organizer for rehabilitation specialists

breakout session, March 2006, March 2008.

University of Utah Hospital, Stroke Grand Rounds. *Best Practice Guidelines for Physical Therapy: Through the Continuum of Care*. April 2001.

UT Stroke Symposium. *Rethinking the way we do business, community based risk reduction programs*. March 2007.

Utah PTA club, in-service. *Outcome measures, how, what, when?* March 2007.

KUER MS research panel member, for open discussion with individuals with MS. March 2006.

University of Utah, Physical Medicine and Rehab physicians in-service. *Current Physical Therapy concepts in stroke rehabilitation*. June 2006.

University of Utah Hospital, Skills Day. *Upper extremity thoughts with an emphasis on CIMT in the sub-acute setting*. April 2006.

APTA CSM, Pre-conference course. *Programs for Fitness, 2° Prevention and Improved Function in Adults with Neurological Disorders*. February 2006.

Utah Physical Therapy Association, Fall State Conference. *Case example of unique therapy program allowing intensity of practice to encourage neuroplastic changes for chronic stroke survivors*. September 2005.

Utah Occupational Therapy Association, State Conference. *Restoration versus Compensation, Principles of neuroplasticity applied to clinical practice*. January 2005.

Utah Physical Therapy Association, Fall State Conference. *Restoration versus Compensation, Principles of neuroplasticity applied to clinical practice*. December 2004.

University Medical Center, Tucson, AZ, Nursing students. *Techniques for maintaining post-surgical hip and back precautions*. February 2003.

Infinia, Flagstaff, AZ, CNA staff, Certified Nursing Assistant staff. *Techniques for maintaining hip precautions, proper lifting mechanics and transfer safety*. June 2003.

Northern Arizona University, Nursing students. *Techniques for maintaining hip precautions and proper lifting mechanics*. May 2002.

Northern Arizona University, Lecture Series, Doctoral project. *The use of an exercise program under the supervision of a physical therapist for a post-surgical lumbar fusion: a case report*. October 2001.

IX. FUNDED/IN REVIEW GRANT ACTIVITY:

Principal Investigator (site lead): **Hayes HA.**

Genetic variation, stress, and functional outcomes after stroke rehabilitation.

University of California –Irvine Multi-center trial.

2017- current. Award amount: \$21,816

Principal Investigator: **Hayes HA.**

StimRouter Neuromodulation System: Implanted peripheral nerve stimulation for pain management when treating patients with chronic post-stroke shoulder pain.

Sponsor: Bioness, Inc.

2017- current. Award amount: \$43,680

Principal Investigator: **Hayes HA.**

National descriptive study of the home health physical therapy environment.

Multi-center trial.

Sponsor: Honda R&D, Inc.

2017- current. Award amount: \$12,490

Principal Investigator: **Hayes HA.**

Psychological, physical, and social influences on elder caregivers of stroke.

Funded Center on Aging Pilot Grant program, Behavioral Science, Social Science and Policy.

2016- current. Award amount: \$19,537

Principal Investigator: **Hayes HA.**

Quantitative Assessment of gait spatiotemporal changes in individuals with chronic disability.

University of Utah, Research Instrumentation Funding.

2016 Award amount: \$28,706

Principal Investigator: **Hayes HA**

Co-Investigators: Edgley S, Mooney G, Boyd L.

Determining improvements of functional ambulation; gait speed, quality and community ambulation for individuals with chronic stroke by providing two intensive training programs.

University of Utah, Center for Contemporary Rehabilitation, Research, Education and Practice

2007-2009 Award amount: \$7500

Principal Investigator: Dibble L.

Co-Investigator: **Hayes HA**, Edgley S, Skalabrin E.

Exercise Training in Stroke Survivors: Secondary Prevention of Recurrent Strokes and Fall Related Injuries.

University of Utah, Primary Care Research Center

2005-2007. Award amount: \$14,625

Principal Investigator: LaStayo PC.

Co-Investigator: **Hayes HA**, Dibble L, Gappmaier E.

High Force, Low-cost Resistance Training for Individuals with Multiple Sclerosis.

National Multiple Sclerosis

2005-2009. Award amount: \$43,615

X. ADDITIONAL RESEARCH ACTIVITY:

Principal Investigator: **Hayes HA.** 2016 to 2018.

Agreement of activity monitors to gold standard of in-person counting for assessment of activity level of patients with sub-acute stroke in an inpatient rehabilitation facility.

Principal Investigator: **Hayes HA.** 2017.

Changes in gait speed and kinematics after participation in a 2-week intensive mobility program in stroke survivors.

Principal Investigator: **Hayes HA.** 2014 to 2018.

Co-Investigator: Bromberg M, Gibson S.

Longitudinal Cognitive and Motor Assessment of Driving Capacity in Individuals with Motor Neuron Disease until Cessation of Driving.

Principal Investigator: Kendall R. 2014 to current.

Co-Investigator: **Hayes HA.**

Exemption Umbrella: *Value of the Treatment and Rehabilitation of Neurological disorders at the University of Utah Covered Entity.*

Principal Investigator: **Hayes HA.** 2014 to 2017.

Acquisition performance and retention learning of an implicit motor sequence task in individuals with stroke.

Principal Investigator: Johnson N. 2014 to 2017.

Co-Investigator: **Hayes HA.**

Health Endpoints and Longitudinal Progression in Myotonic Dystrophy type 1 (HELP-DM). Multi-center trial.

Principal Investigator: **Hayes HA.** 2010-2014.

Faculty Mentor: Lee Dibble, PT, PhD, Department of Physical Therapy.

Effect of Dopamine on acquisition performance and retention learning of an implicit motor sequence task in individuals with early Parkinson's Disease during a postural task.

Principal Investigator: **Hayes HA.** 2004-2017.

Tracking of measures of physical performance and physiological measures in persons with focal neurological injury participating in the University of Utah Rehabilitation and Wellness Clinic.

Principal Investigator: Bamberg S. 2011-2015.

Co-Investigator: **Hayes HA.**

Optimization and Validation of a Computerized Orthotic Prescription System.

Principal Investigator: Edgley S. 2008-2012.

Co-Investigator: **Hayes HA.**

Safety and Efficacy of Aquatic Treadmill Therapy for Improving Economy of Gait, Gait Speed, Balance, Cardiovascular Fitness, and Quality of Life in Ambulatory Adult Stroke Patients: A Pilot Study.

Principal Investigator: **Hayes HA.** 2007-2013.

Determining improvements of functional ambulation; gait speed, quality and community ambulation for individuals with chronic stroke by providing two intensive training programs.

Principal Investigator: Edgley S. 2010-2014.

Research Rater: **Hayes, HA.**

Multi-site project, University of Utah site.

Functional Ambulation: Standard Treatment vs. Electrical Stimulation Therapy (FASTEST) Trial in Chronic Post-Stroke Subjects with Foot Drop.

Principal Investigator: Edgley S. 2004-2007.

Primary Research Rater: **Hayes HA.**

"Everest Trial" Multi-site trial. Use of electrical implants on upper extremity functional improvement in stroke survivors.

XI. COMMUNITY SERVICE:

American Stroke Association, Saving Strokes Golf Program, Utah, 2013-2017

American Stroke Association, Utah Heart/Stroke walk event coordinator for Stroke Awareness 2013-2017

Utah Valley Stroke Task Force meeting, Presenter, March 2013

OSHER Lifelong Learning Institute, Primary Stroke Prevention, Presenter, March 2013

American Heart/Stroke Association heart/stroke walk. Lecture to stroke survivors on recovery post-stroke, 2011

American Heart/Stroke Association, Presenter, Utah, Stroke support group. Physical activity and exercise recommendation for stroke survivors, 2008

XII. SERVICES TO THE UNIVERSITY OF UTAH/COLLEGE/SCHOOL ON COMMITTEES/COUNCILS/COMMISSIONS:

Inter-professional Education Committee

College of Health

2019-2021

DPT Admissions Committee

Department of Physical Therapy and Athletic Training

2005-2017

Utah Stroke Outdoor and Active Recreation Committee

Collaboration of Utah Stroke Center, Physical Medicine and Rehabilitation, Sugarhouse Health Center, Department of Physical Therapy and Athletic Training, LS Skaggs Patient Wellness Center 2014-2017

LS Skaggs Patient Wellness Center, Chair of community liaison

Collaboration with LS Skaggs Patient Wellness Center, Department of Physical Therapy and Athletic Training

2016-2017

Curriculum Advising Committee

Department of Physical Therapy and Athletic Training

2014-2017

XIII. HONORS AND AWARDS:

Hayes, H.A. 2011 recipient of the "Golden Synapse" Award from the Journal of Neurologic Physical Therapy, an award for the most outstanding paper in the journal for the year.

Hayes, H.A., Ballard, J. Rehabilitation and Wellness Clinic. 2014 recipient of Beacons of Excellence Award, University of Utah for undergraduate opportunities at the University of Utah.

XIV. CURRENT TEACHING RESPONSIBILITIES:

Physical Therapy 7920, Doctoral seminar

Physical Therapy 7940, Doctoral seminar

