**CURRICULUM VITAE**

**Date:** June 30, 2024

Name: Marcie Harris-Hayes, PT, DPT, MSCI

**Contact Information**

**Address, Telephone and email:**

Office:

Washington University School of Medicine

Program in Physical Therapy

Campus Box 8502

4444 Forest Park Boulevard

Saint Louis, MO 63108

Phone Number: 314-286-1435

FAX: 314-286-1410

Email: harrisma@wustl.edu

Home:

4545 McPherson Ave

St. Louis, MO 63108

Phone Number: 314-369-2997

**Present Position**

Professor, Physical Therapy and Orthopaedic Surgery

Director, Rehabilitation Research for Orthopaedic Conditions (RROC) Laboratory

**Education**

1994 Bachelor of Science, Biology

Missouri State University, Springfield, MO

1996 Master of Physical Therapy, Physical Therapy

Northwestern University, Chicago, IL

2003 Doctor of Physical Therapy, Physical Therapy

Washington University, St. Louis, MO

2010 Master of Science, Postdoctoral Training with emphasis in Clinical Investigation Washington University, St. Louis, MO

**Academic Positions / Employment:**

1997-2000 Physical Therapist, Barnes-Jewish Hospital, St. Louis, MO

2000-2005 Instructor, Washington University School of Medicine, Program in Physical Therapy, St. Louis, MO

2010-2011 Visiting Faculty, Indiana University, School of Health, Physical Education and Recreation, Department of Kinesiology, Bloomington, IN

2005-2012 Assistant Professor, Washington University School of Medicine, Physical Therapy and Orthopaedic Surgery, St. Louis, MO

2003-2013 Adjunct Faculty, Kaiser Permanente Orthopaedic Manual Therapy Fellowship and Movement Science Fellowship, Los Angeles, CA

2012-2018 Associate Professor, Washington University School of Medicine, Physical Therapy and Orthopaedic Surgery, St. Louis, MO

2018-Present Professor, Washington University School of Medicine, Physical Therapy and Orthopaedic Surgery, St. Louis, MO

**Clinical Title and Responsibilities (if distinct from academic title & responsibilities)**

2000-2008 Physical Therapist, Washington University Physical Therapy Clinics, Responsibilities: Perform evaluation and provide treatment for patients with musculoskeletal impairments.

2000-2007 Physical Therapist, Barnes-Jewish Hospital

Responsibilities: Consultation for evaluation and treatment for patients with musculoskeletal impairments.

**Teaching Title and Responsibilities**

***Current***

**PhD**

2010-Present Advisor, Teaching Practicum in Movement Science, PhD in Movement Science (WUSM)

Enrollment: 1 student

2013-Present Lecturer, Bioenergetics, PhD in Movement Science (WUSM)

Enrollment: 5 students

2018-Present Presenter, Program Seminar, PhD in Movement Science (WUSM)

Enrollment: 5 students

**DPT**

2021-Present Content Expert/Lecturer/Lab assistant, Modules 1-5 Kinesiology, Professional Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 85-90 students

2021-Present Lecturer, Module 6 Exercise Adherence (Moderators), Professional

Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 85-90 students

2021-Present Discussant, Module 4B, Evidence, Professional Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 85-90 students

2021-Present Coach, Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 5-11 students

2021-Present Evaluator, Module 8, Patient client care examinations, Professional Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 85-90 students

2021-Present Discussant, Module 7/8, Journal club, Professional Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 85-90 students

2021-Present Lab Assistant, Module 7/8, Government Affairs, Professional Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 85-90 students

2021-Present Lab Assistant, Module 8, CSE, Professional Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 85-90 students

2021-Present Discussant, Module 6 Clinical Epidemiology and Evidence Based Medicine (WUSM)

Enrollment: 40 students

***Recent (Prior to Curriculum initiated in 2021)***

2004-2023 Lab Assistant, Professional Issues and Skill Development IV, Professional Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 85-90 students

2004-2013 Course Assistant, Diagnosis & Management of Musculoskeletal

Conditions:

Lower Quarter, Post-Professional Clinical Doctorate (PP DPT)

Curriculum (WUSM)

Enrollment: 10-20 students

2004-2013 Course Assistant, Diagnosis & Management of Musculoskeletal

Conditions:

Upper Quarter, Post-Professional Clinical Doctorate (PP DPT)

Curriculum (WUSM)

Enrollment: 10-20 students

2005-2021 Lab Assistant, Kinesiology II, Professional Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 85-90 students

2009-2020 Lecturer and Evaluator – Student projects, Biomechanics, PhD in Movement Science (WUSM)

Enrollment: 5 students

2010-2021 Course Master, Kinesiology I, Professional Clinical Doctorate (DPT)

Curriculum (WUSM)

Enrollment: 85-90 students

2011-2014 Lecturer, Human Anatomy, Professional Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 85-90 students

2012-2013 Lecturer, Orthopaedic Medicine, Professional Clinical Doctorate (DPT)

Curriculum (WUSM)

Enrollment: 85-90 students

2014-2023 Lecturer, Moderators of Health, Wellness & Rehabilitation, Professional

Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 85-90 students

2017-2019 Evaluator, Diagnosis & Management of Musculoskeletal Conditions II, Professional Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 85-90 students

2017-2020 Advisor, Lab Practicum in Movement Science, PhD in Movement Science (WUSM)

Enrollment: 1 student

2017-2023 Lecturer, Biomechanics Focus study, Case Integration III, Professional

Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 85-90 students/Small group: 15 students

2017-2023 Advisor/Evaluator/Presenter Diagnosis, Evidence and Analysis III, Professional Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 85-90 students

2017-2023 Advisor/Evaluator, Case Integration III, Professional Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 85-90 students/Advised: 2 students

2018-2023 Evaluator, Professional Issues and Skill Development III, Professional Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 85-90 students

2018-2023 Lab Assistant, Module TBD (PISD IV), Professional Clinical Doctorate (DPT) Curriculum (WUSM)

Enrollment: 85-90 students

2018-2020 Lecturer, Movement Science Clinical Fellowship (WUSM)

Enrollment: 8 students

Past participation in professional courses:

**Course Coordinator:** Orthopaedic Medicine

**Course Assistant:** Diagnosis & Management of Musculoskeletal Conditions I, Diagnosis & Management of Musculoskeletal Conditions II, Diagnosis & Management of Musculoskeletal Conditions III, Essential Skills II

**Lecture/Key Contributor:** Human Anatomy, Kinesiology II, Case Integration I, Case Integration II, Professional Issues and Skill Development III, Essential Skills I, Essential Skills III, Diagnosis and Evidence Analysis III, Case Integration III, Ambulatory Care Lecture Series for Residents, Medical and Mental Health Conditions

Past participation in selected courses for post-professional students.

**Lecture/Key Contributor:** Diagnosis & Management of General Medical

Conditions

**University, School of Medicine and Hospital Appointments and Committees**

2000-2021 Committee on Academic Professional Evaluation of Students

(PTCAPES), Program in Physical Therapy, WUSM

2002-2005 Sports Special Interest Group - Faculty Advisor, Program in Physical

Therapy, WUSM

2002-2009 Admissions Committee, Program in Physical Therapy, WUSM

2003-2004 Clinical Advisory Committee, Program in Physical Therapy, WUSM

2003-2004 Physical Therapy Council, Program in Physical Therapy, WUSM

2004-PresentAcademic Women’s Network, WUSM

2005-Present Research Advisory Council, Program in Physical Therapy, WUSM

2006-2007 Program Innovation Council, Program in Physical Therapy, WUSM

2007-2008 Executive Committee K12/K30, WUSM

2010-2015 Peer Group Mentoring Program for Women, WUSM

2010-Present Institute of Clinical and Translational Sciences, WUSM

2012-2014 Center for Clinical Excellence, Hip/Knee Replacement Patient Centered

Outcomes Pilot Committee, WUSM

2012-Present Musculoskeletal Research Center, WUSM

2012-2023 CORRTNet Advisory Committee, Program in Physical Therapy, WUSM

2014 Strategic Planning Committee, Program in Physical Therapy, WUSM

2015 Faculty Search Committee – Education Division, Program in Physical Therapy, WUSM

2015-2019 Faculty Liaison, Department Orthopaedic Surgery Residency, Core Curriculum, Program in Physical Therapy, WUSM

2015-Present  Physical Therapy Day of Service - Washington University Physical

Therapy - Faculty Advisor

2015-2017 Review Committee, Barnes-Jewish Hospital Foundation/Washington University Institute of Clinical and Translational Sciences Clinical and Translational Research Funding Program, WUSM

2016-2021 CORRT Scholar liaison, Program in Physical Therapy, WUSM

2016-Present Coordinator, WUPT Research Seminar and Webcast, Program in Physical Therapy, WUSM

2016-2018 Distinguished Community Service Award Selection Committee, WUSM

2016-Present Faculty Mentoring Program Development, Program in Physical Therapy, WUSM

2017-2018 Strategic Planning Committee, Program in Physical Therapy, WUSM

2017-2018 Faculty Search Committee – Education Division, Program in Physical Therapy, WUSM

2017-2019 Review Committee, Clinical Research Training Center, KL2 Career Development Awards, WUSM

2017-2019 NIH Mock Study Section, Office of Training Grant and Clinical Research Training Center, WUSM

2018-2019 Pain Task Force, Program in Physical Therapy, WUSM

2018-2020 Faculty discussant, Clinical Research Training Center, Annual Research Training Symposium and Poster Session, WUSM

2019-2020 Faculty Search Committee – Clinical and Education Division, Program in Physical Therapy, WUSM

2019-2021 Architecture Team Leader, Program in Physical Therapy, WUSM

2019-2022 Curriculum Design Committee, Program in Physical Therapy WUSM

2019-Present Member, Research Assistantship Committee, Program in Physical Therapy WUSM

2020-2020 Ad Hoc Committee Member, Faculty Appointments and Promotions, Department of Medicine, WUSM

2021-Present Faculty Advisor, BIPOC Student Alumni Mentoring Program, Program in Physical Therapy, WUSM

2021-Present Member, Physical Therapy Competency Attainment Committee (PT-CAC), Program in Physical Therapy, WUSM

2022-Present Member, Steven J. Rose Diversity Development Scholarship Review Committee, WUSM

2023-Present AI for Health Institute (AIM), WUSM

**Medical Licensure and Certification**

1997-Present Missouri Board of Registration for the Healing Arts, Active: #111958

Professional Physical Therapist for the State of Missouri

2005-2015 Certified Clinical Specialist – Orthopaedic Physical Therapy, American

Board of Physical Therapy Specialties

**Honors and Awards**

2004 Early Career Women’s Faculty Professional Development Seminar

Association of American Medical Colleges – selected to attend

2010 Enhancing Rehabilitation Research in the South (ERRIS) Grant Writing Workshop – selected to attend

2012 Young Investigator – Femoroacetabular Impingement Research Symposium, American Academy of Orthopaedic Surgeons/Orthopaedic Research Society - selected to attend

2013 Early Career Reviewer Program, Center for Scientific Review, National Institutes of Health - accepted to participate

2013 8th Annual Pain Consortium Symposium on Advances in Pain Research, National Institutes of Health - Selected Finalist for Mitchell Max Award

2014 Academic Medical Leadership Program for Physicians and Scientist

Washington University School of Medicine - Selected to attend

2014 New Investigator Workshop on Advancing Arthritis Research – Center for Enhancing Activity and Participation among person with Arthritis (ENACT) – selected to attend

2015 Training in Grantsmanship for Rehabilitation Research (TIGRR) Grant Writing Workshop – selected to attend

2016 Helen Holzum Whalen Service Award, Eastern District, Missouri Physical Therapy Association

2017 Outstanding Service Award, Service to the Profession, Missouri Physical Therapy Association

2017 Northwestern University Department of Physical Therapy and Human Movement Sciences Alumni Association’s Research Achievement Award

2022 William H. Harris, MD Award for manuscript of scientific merit, *J Orthop Res* (Co-author)

**Editorial Responsibilities**

***Editorial Board Member***

2018-2021 Journal of Orthopaedic & Sports Physical Therapy, Associate Editor

***Grant reviewer:***

2017-2020 NIH, NICHD, Function, Integration, and Rehabilitation Sciences Subcommittee Ad Hoc Study Section Member

2017-2019 NIH, NICHD, Special Emphasis Panel, NCMRR Early Career Research Award Ad Hoc Study Section Member

2018 NIH, NIBIB, Study Section for review Biomedical Technology Resource Center (BTRC)

2020-Present NIH, NICHD, Function, Integration, and Rehabilitation Sciences Subcommittee, Initial Review Group Member

2023-Present NIH, NICHD, Function, Integration, and Rehabilitation Sciences Subcommittee, Chair

***Manuscript reviewer:***

* *Manuscript reviewer for 15 peer-reviewed journals in the fields of rehabilitation and orthopaedics*

2009-Present Archives of Physical Medicine and Rehabilitation

2012-Present Journal of Orthopaedic & Sports Physical Therapy

2013-Present Clinical Biomechanics

2013-Present Physical Therapy Journal

2013-Present Clinical Orthopaedics and Related Research

2015-Present Journal of Athletic Training

2021-Present British Journal of Sports Medicine

2021-Present Musculoskeletal Science and Practice

2022-Present Journal of Orthopaedic Research

***Abstract reviewer:***

2009-2013 Section on Research (APTA)

2012-2013 Gait & Clinical Motion Analysis Society Annual Conference

2012-Present Musculoskeletal Research Symposium (WUSM)

2013-Present Orthopaedic Section (APTA)

2017 Orthopaedic Research Society, Midwest Musculoskeletal Workshop

***Book reviewer:***

2009 American College of Occupational and Environmental Medicine Practice Guidelines for Hip Pain

**National Panels, Committees, Boards**

***American Physical Therapy Association***

1996-PresentMember

2000-Present Academy of Orthopaedic Physical Therapy (APTA)

2007-2009 Finance Committee

2014-2017 Nominating Committee, Imaging Special Interest Group

2017-2021 Research Committee

2003-Present Academy of Physical Therapy Research (APTA)

2013-2017 Awards Committee, Biomechanics Special Interest Group

2017-2019 Chair, Biomechanics Special Interest Group

2003-Present American Academy of Sports Physical Therapy (APTA)

2012-Present Hip Special Interest Group

1996-PresentMissouri Physical Therapy Association

2004-2007 Treasurer

2007-2008 President-Elect

2008-2011 President

2011-2012 Past President

2011-2013 Finance Committee

Eastern District (MPTA)

2002-2005 Program Chair – Eastern District

2005-2007 Student Liaison – Eastern District

2005-2007 Chair – Eastern District

2005-2007 Chair – Task Force for Consumer Access

***Other***

2006-2012 Diagnosis Dialog, Defining the “x” in DxPT, Planning Committee

###### 2006-Present Task Force Clinical Practice Guidelines (Hip), Academy of Orthopaedic Physical Therapy

2014-Present Member, Osteoarthritis Research Society International (OARSI)

2014-2017 National Quality Forum Musculoskeletal Steering Committee, Musculoskeletal Measure Endorsement and Maintenance Project

2017-2018 Voting Panel, Appropriate Use Criteria for *Management of Osteoarthritis of the Hip.* American Academy of Orthopaedic Surgeons

2017-2022 Awards Committee, Journal of Orthopaedic and Sports Physical Therapy

2017-2020 Primary Care and Chronic Illness Standing Committee Expert Reviewer, National Quality Forum

2017-Present Major Extremity Trauma Research Consortium (METRC) Consortium Committee

2017-Present Major Extremity Trauma Research Consortium (METRC) Science Committee

2017-Present LRP Ambassador Program, NIH

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| 2018-Present | International Hip-related Pain Research Network (IHiPRN) |
| 2020-2022 | Advisory Board Member, Journal of Orthopaedic and Sports Physical Therapy/Movement Science Media Board of Directors |
| 2022-2024 | Member at Large, Journal of Orthopaedic and Sports Physical Therapy/Movement Science Media Board of Directors |
| 2022-2023 | Chair, Search Committee for President of Journal of Orthopaedic and Sports Physical Therapy/Movement Science Media Board of Directors |
| 2024-Present | Vice President, Journal of Orthopaedic and Sports Physical Therapy/Movement Science Media Board of Directors |
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**Community Service Contributions**

***Community Activities:***

1993-1994 Boys and Girls Club of Springfield, MO – Program Director

2000 “Exercises and Ergonomics for Work” Health and Wellness Day – Student Support Services, WUSM

2001-2002 Washington University Hilltop Campus Health Awareness Day

2002-2011 Physical Therapy Month, Program in Physical Therapy, WUSM

2003-2009 Mini-Medical School, WUSM

2003 Relay for Life Faculty Representative, Program in Physical Therapy, WUSM

2003-2011 Legislative Fitness Clinic – State Capital, Missouri Physical Therapy Association, Provided postural recommendations to members of Congress and their staff

2003-2010 The Academy of Science of St. Louis, Volunteer – Speakers for Science Program

2004-2007 Mentor, Alumni Dedicated to Assisting Physical Therapy Students (ADAPTS), Northwestern University Physical Therapy

2006 US Figure Skating Championships, Volunteer Physical Therapist

2006-2008 Lunch and Learn Series, Saint Louis Science Center, Coordinator and

Presenter of on-going lectures on fitness-related topics

2007 Bike-Fit, EDMPTA

2007-2008 Garden Villas, Exercise for Seniors”

2012-2018 **“**Physical Therapist: Movement System Experts”, Pre-Medical Institute

Washington University School of Medicine

2013-present Pedal the Cause, Participated in fundraising for cancer research

performed in St. Louis, raised over $27,000 to date

2015-2018 Bridge Coach, Two Degrees Program, Youth Learning Center

2018-present Honorary Chair, Sustainable Therapy Haiti

2016-present Help Our Student Travel (Host) Program, Northwestern University Feinberg School of Medicine – St. Louis Host.

2020-2021 Advisor, AP Capstone: Research at Nixa High School (Kelly Matney, Teacher), Student: Edward Eiche

2020-2021 Food delivery to local senior centers, Food Search (United Way)

2021-present Mentor, Missouri Early Professional Special Interest Group, APTA, Missouri chapter

2021-present Volunteer, Institute for Conservational Medicine, St. Louis Zoo

2024-2024 Volunteer, STL Go Marathon, Washington University

***Media activities***

2003 Safe Running Strategies, Health and Fitness, St. Louis Post Dispatch

2018 Injuries and Pain, Can We Do Better? Unleashing the Power of Movement, Venture Café

2021 Podcast episode: Exploring the MSCI for Clinical Experts Interested In Independent Research. *Clinical Appraisal*

2021 Podcast episode: Treating Hip-Related Groin Pain—Which Method Is Best? *Journal of Orthopaedic and Sports Physical Therapy Insights*

**Major Invited Professorships and Lectureships**

2001 “Osteoarthritis: The Spectrum of Care from the Prevention to Rehabilitation” Arthritis Foundation’s Fall Prevention Forum, St. Louis, MO

2005 “Diagnosis and Treatment of Movement System Impairments of the Knee”

Alumni Day - Washington University Program in Physical Therapy, St. Louis, MO

2006 “Movement Impairment Syndromes as a Cause of Musculoskeletal Pain”

The Missouri Pain Initiative, Lake of the Ozarks, MO

2007 “Anatomy and Orthopaedic Management of the Shoulder and Knee: From the Lab to the Clinic”, Learn 4 Research 2007 – Student Program, Washington University Program in Physical Therapy, St. Louis, MO

2008 “Diagnosis and Treatment of Movement System Impairment Syndromes: Lower

Quarter Advanced Application”, Arizona Physical Therapy Association’s Professional meeting, Phoenix, AZ

2009 “Intra-articular Hip Disorders: Understanding Structure, Function and Participation”

Northwestern University Physical Therapy and Human Movement Sciences, Chicago, IL

2012 “Proposed Risk Factors for Hip Osteoarthritis”, Alumni Day, Washington University Program in Physical Therapy, St. Louis, MO

2013 “Optimizing Post-Operative Rehabilitation and Return to Activity after FAI Procedures”, St. Louis Hip Skills Course, St. Louis, MO

2013 “Factors Influencing Rehabilitation Outcomes in Lower Extremity Conditions

1st Annual Orthopaedic Section Meeting, Orlando, FL

2013 “Rehabilitation Factors in Pre-arthritic Hip Disease”, NYPTA Annual Conference, Albany, NY

2015 “Rehabilitation of the Hip Preservation Patient”, Innovations in the Treatment of Hip and Knee Disorders – Department of Orthopaedic Surgery, St. Louis, MO

2017 “Clinical Practice Guidelines (CPG) for Physical Rehabilitation and Outcome Measures for Patients with Hip Fracture Developed as a Collaboration Between the Academy of Geriatric Physical Therapy, and the Orthopedic Section of the American Physical Therapy Association (APTA).” Pre-Congress Workshop, Fragility Fracture Network Global Congress, Malmo, Sweden

2017 “Recommendations for Physical Rehabilitation and Outcome Measures in Daily Clinical Practice After Hip Fracture”, 6th Annual Fragility Fracture Network Global Congress, Malmo, Sweden

2018 “Rehabilitation Factors in Prearthritic Hip Disorders”, Research Seminar, Northwestern University Physical Therapy & Human Movement Sciences, Chicago, IL

2018 “Hip Instability: What Is It and How Do I Manage It?” APTA Learning Center

2018 “Addressing Pain Problems Through the Use of Movement Science, Annual Orthopaedic Section Meeting, Baltimore, MD

2018 “Rehabilitation for Hip Related Groin Pain”, Ohio State Sports Medicine Hip Symposium, Columbus OH

2019 “Rehabilitation for Prearthritic Hip Disorders”, Midwest Orthopaedics at Rush, Chicago, IL

2019 “Advances in Physical Therapist-led Intervention for Hip Joint Pain in the Young to Middle Aged Adult”, Innovations in the Treatment of Hip & Knee Disorders, St. Louis, MO

2019 “Physical Therapy Management of Older Adults with Hip Fracture: Clinical Practice Guidelines”, BJH Department of Rehabilitation, St. Louis, MO

2020 “Movement System Factors in Pre-arthritic Hip Disorders”, Movement System Clinical Fellowship Symposium, St. Louis, MO

2020 “Research Funding Symposium Part 2: Perspectives from Funded Junior Physical Therapy Researchers”, Combined Sections Meeting (CSM), Denver, CO

2021 “Spotlight on Research: Hip Studies and Clinical Implications, Combined Sections Meeting (CSM), Orlando, FL

2021 “Hip-Related Groin Pain: Can Movement Advance Our Knowledge Beyond the Consensus?”, Combined Sections Meeting (CSM), Orlando, FL

2022 “Nonarthritic Hip Disorders, Round table”, The Ohio State University Hip Outcomes Team, Columbus, OH

2023 “Hip Dysplasia: It’s Not Just a Shallow Socket”, Combined Sections Meeting (CSM), San Diego, CA

2024 “A Diversity, Equity, Inclusion, and Belonging Blueprint Spanning Education, Practice, and Scholarship in a PT Program. APTA Combined Sections Meeting, Boston, MA*.*

**Other Professional Presentations**

Lecture and Demonstration presentations

“Diagnosis and Treatment of Movement System Impairment Syndromes

Lower Quarter Advanced Application” (Adjunct Faculty)

2003-2013 Kaiser Permanente Los Angeles Orthopaedic Manual Therapy Fellowship and Kaiser Permanente Los Angeles Movement Science Fellowship (Lecture/Demonstration format: 25 hours)

Lower Quarter Advanced Application” (Lecture and Skill instruction)

**International**

2002 Montreal, Quebec (16 hours)

2002 Toronto, Ontario (32 hours)

2007 Oxford, England (16 hours)

2007 Frome, England (16 hours)

2007 Edmonton, Alberta (8 hours)

2016 Honolulu, HI, Japanese attendees (16 hours)

2018 Cabo San Lucas, Mexico (6 hours)

**National**

2004 Ames, IA (16 hours)

2004 San Francisco, CA (16 hours)

2011 San Diego, CA (16 hours)

2012 Visalia, CA (16 hours)

2016 Honolulu, HI, (16 hours)

Introduction to Concepts and Application” (Lecture/Demonstration format)

**International**

2004 London, Ontario (16 hours)

**National**

2003 Urbana, IL (16 hours)

2004 Portland, OR (16 hours)

2007 Lake of the Ozarks, MO (16 hours)

2010 Brighton, MI (16 hours)

Upper Quarter Advanced Application” (Lecture and Skill instruction)

**International**

2002 Montreal, Quebec (16 hours)

2006 Ottawa, Ontario (16 hours)

2007 Frome, England (16 hours)

2007 Oxford, England (16 hours)

2003 “Tibiofemoral Rotation: A Case Report”, Department of Physical Therapy Research Seminar, St. Louis University

2005 “Diagnosis and Treatment of Movement System Impairments of the Knee”, APTA National Conference, Boston, MA

2005 “Movement Impairment System: Case Studies”, APTA National Conference, Boston, MA

2006 “Foot, Ankle and Knee: Special Focus on Diagnosis and Treatment”, SSM

Rehab, St. Louis, MO

2006 “Introduction to Tissue Impairment Diagnosis”, APTA National Conference, Orlando, FL

2012 “Don’t Forget to be Hip: Looking at the Role of the Hip in Lumbar Spine

Disorders”, APTA Combined Sections Meeting

2013 “Structural and Functional Considerations in the Rehabilitation of Young Active

Adults with Intra-articular Hip Disorders.”, APTA Combined Sections Meeting,

San Diego, CA

2014 “Adherence: An Important but Often Forgotten Determinant of Treatment

Effectiveness”, APTA Combined Sections Meeting, Las Vegas, NV

2015 “Intra-articular, prearthritic hip disease: effectiveness of movement pattern training”, APTA Combined Sections Meeting, Indianapolis, IN

2015 “Intra-articular, prearthritic hip disease: effectiveness of movement pattern training”, MPTA Spring Meeting, St. Louis, MO

2015 *“*You Make the Call: FAI (Femoroacetabular Impingement) or Not?”, Lab Assistant 3rd Annual Orthopaedic Section Meeting, Orlando, FL

2015 “Rehabilitation Management of Common Chronic Diseases”, Barnes-Jewish Hospital, St. Louis, MO

2016 “Imaging and Physical Therapist Professional Education and Clinical Practice”, APTA Combined Sections Meeting, Anaheim, CA

2018 “Movement Pattern Training Improves Function in People with Prearthritic Hip Disorders”, Missouri Physical Therapy Association, Eastern District, St. Louis, MO

2018 “Rehabilitation for Femoroacetabular Impingement and Other Prearthritic Hip Disorders”, Northwestern University Physical Therapy & Human Movement Sciences Alumni Association, Chicago, IL

2018 “Task-Specific Movement Training: A Novel Treatment Approach for Chronic Lower Extremity Pain”, APTA Combined Sections Meeting, New Orleans, LA

2018 “Reinterpreting the Role of Strength in Movement in Individuals with Hip Pain”, APTA Combined Sections Meeting, New Orleans, LA

2018 “Evidence-based Analysis of Movement of the Hip” WUPT Clinical Instructors Meeting, St. Louis, MO

2019 “Physical Therapy Management for Older Adults with Hip Fracture, APTA Combined Sections Meeting, Washington, D.C*.*

2019 “Rehabilitation for Pre-arthritic Hip Disorders” St. Louis Hip and Knee Innovations Course, Washington University School of Medicine, St. Louis, MO

2020 “Lessons Learned: How to Design a Multi-Center Motion Analysis Study” *Conference Proceedings, Gait and Clinical Motion Analysis Society Annual Conference.*

2021 “Update Hip Research” Washington University Program in Physical Alumni Event, St. Louis, MO

2021 “The Way You Move” Co-sponsored by Sustainable Therapy and the Eastern District, APTA Missouri. Fundraiser for Sustainable Therapy

2021 “Clinical Practice Guidelines for Hip Fracture, Fragility Fracture Network Webinar

2022 “OSU Hip Outcome Team Q3 Meeting/Panel Discussion. The Ohio State University, Columbus, OH

2022 “Hip-Related Groin Pain: Can Movement Advance Our Knowledge Beyond the Consensus. NexusMotion, Virtual.

**Consulting Relationships and Board Memberships**

###### 2002-2006 Northwestern University Physical Therapy Alumni Association Board of

###### Directors

2004-2006 Nominating Committee

2005-2006 Member at Large

2021-2023 Consultant – Hip arthroscopy clinical practice guidelines, The Ohio State University Wexner Medical Center Sports Medicine

**Research**

###### ORCID Identifier: 0000-0003-4274-1651

***Past Funding***

2006-2008 **Source: NIH-NICHD, NCMRR,** **R01 HD047709-01**

Role: Co-Investigator

Title: “Classification-Directed Treatment of Low Back Pain”

Principal Investigator: Van Dillen, L.R.

Amount: $351,168

2006-2010 **Source: NIH-NCRR, 1 UL1 RR 024992-01**

Role: Scholar

Title: Washington University Institute of Clinical and Translational Sciences Research Education, Training and Career Development

Principal Investigator: Polonsky, K.S.

Amount: $6,000

2007-2008 **Source: Mallinckrodt Institute of Radiology** Role: Principal Investigator

Title: “Ultrasonography of Intra-Articular Disease of the Hip”

Amount: $1,500

2008-2010 **Source: Program in Physical Therapy**

Role: Principal Investigator

Title: “Ultrasonography of Intra-Articular Disease of the Hip”

Amount: $1,500

2008-2010 **Source: Mallinckrodt Institute of Radiology** Role: Principal Investigator

Title: “Investigation of Proposed Risk Factors for Intra-Articular Hip Disorders"

Amount: $13,500

2008-2013 **Source: NIH-NICHD, NCMRR, NINDS,** **K12 HD055931**

Role: Scholar

Title: Multicenter Career Development Program for Physical and Occupational Therapists

Principal Investigator: Mueller, M.J.

Amount: $4,626,510 total; Scholar amount $95,580/year for 3 years

2010-2013 **Source: ICTS JIT Core Usage Funding**

Role: Co-investigator

Title: Novel tools for assessing the treatment response to antibiotic therapy in vertebral osteomyelitis: an exploratory study.

Principal Investigator: Marschall J, MD

2011-2015 **Source:** **NIH-NICHD, NCMRR,** **K23HD067343**

Role: Principal Investigator

Title: Rehabilitation Factors in Pre-Arthritic Hip Disease

Amount: $427,761

2014-2015 **Source: Pediatric Orthopaedic Society of North America**

Role: Co-investigator

Title: Clinical planning grant on motion analysis in femoroacetabular impingement

Principal Investigator: Podeszwa, D, MD

2014-2016 **Source: NIH-NIAMS,** **L30 AR066989**

Role: Principal Investigator

Title: Loan Repayment Program

2016-2017 **Source: NIH-NIAMS, L30 AR066989**

Role: Principal Investigator

Title: Loan Repayment Program Renewal

2016-2018 **Source: NIH-NICHD, NCMRR,** **R21HD086644**

Role: Co-Principal Investigator

Title: Movement Pattern Training in People with Intra-articular, Prearthritic Hip Disorders

Amount: $423,377

2016-2019 **Source: Department of Defense**

Role: Collaborator

Title: METRC REPAIR: Rehabilitation Enhanced by Partial Arterial Inflow Restriction

Stinner DJ, MacKenzie EJ; McAndrew-Project PI of Subc from JHU

2017-2018 **Source: ICTS JIT Core Usage Funding**

Role: Principal Investigator

Title: Mechanisms Underlying Movement Pattern Training in People with Prearthritic Hip Disorders

Amount: $10,000

2017-2018 **Source: Ohio Physical Therapy Association**

Role: Mentor

Title: Posture and Movement Training for Persons with Non-Arthritic Hip Disease

Principal Investigator: Lindsey Brown, PT, DPT

2017-2019 **Source: Foundation for Physical Therapy Research**

Role: Principal Investigator

Title: Movement Pattern Training in People with Intra-articular, Prearthritic Hip Disorders

Amount: $40,000

2017-2020 **Source: Orthopaedic Research and Education Foundation**

Role: Consultant

Title: Mobile Weight-Support (MWeST): A Prospective, Randomized Controlled Trial for Mobility after Geriatric Lower Extremity Fracture

Principal Investigator: Miller, A, MD

2018-2019 **Source:** **The Foundation for Barnes-Jewish Hospital/Clinical and Translational Research Funding Program**

Role: Principal Investigator

Title: Movement System Impairments in Patients with Lower Urinary Tract Symptoms

Amount: $48,000

2019-2020 **Source: Foundation for Physical Therapy Research**

Role: Principal Investigator

Title: Comparison of Movement Pattern Training and Manual Therapy for Pre-arthritic Hip disorders: A Pilot Randomized Clinical Trial

Amount: $240,000

2020-2021 **Source: Big Ideas, Institute for Informatics, WUSM**

Role: Contributor

Title: Integration of mobile health (mHealth) based behavioral health treatment (BHT) with clinical care and the electronic medical record (EMR)

Amount: $50,000

Principle Investigator: Abby Cheng, MD

2019-2022 **Source: ICTS JIT Core Usage Funding**

Role: Principal Investigator

Title: Sustained Effects of Rehabilitation On Joint Structure In People With Prearthritic Hip Disorders

Amount: $9,992.50

2018-2023 **Source: NIAMS, NIH**

Role: Collaborator

Title: Muscle Geometry and its Influence on Function in Patients with Development Dysplasia of the Hip

Principal Investigator: Michael Harris, PhD

2021-2023 **Source: Foundation for Physical Therapy Research**

Competitive Renewal

Role: Principal Investigator

Title: Comparison of Movement Pattern Training and Manual Therapy for Pre-arthritic Hip disorders: A Pilot Randomized Clinical Trial

Amount: $120,000

2022-2023 **Source:** **NIH-NICHD, NCMRR,** **K12 HD055931-15**

Role: Principal Investigator

Title: Multicenter Career Development Program for Physical and Occupational

Therapy

Amount: $3,867,387

###### ***Current funding***

2022-2024 **Source: NIH-NINR,** **R21NR020379**

Role: Co-Investigator

Title: Assessing multifactorial etiology of IC/BPS using a novel PFM-Hip-Trunk muscle network analysis

Principle Investigator: Yingchun Zhang, PhD

Amount: $442,070

2022-2027 **Source: NIH-NICHD, NCMRR,** **R25 HD109110**

Role: Executive Committee/Program Faculty

Title: Turning the TiDe: Training Diverse Clinical Scientists in Rehabilitation Research

Principle Investigator: Elizabeth Skidmore, OT, PhD; Gregory Hicks, PT, PhD

Amount: $826,345

2023-2025 **Source:** **NIH-NINR, R21HD112985**

Role: Co-Investigator

Title: Assessing Multifactorial Etiology of Overactive Bladder Using a Novel PFM-HIP-TRUNK Muscle Network Analysis

Principle Investigator: Theresa Spitznagle, DPT, WCS, Yingchun Zhang, PhD

Amount: $440,650

**Trainee/Mentee/Sponsorship Record**:

**Trainee Advisement**

***Graduate Students (PhD and Postdoctoral)***

2010-2011 Priscilla Weaver, DPT, PhD, PCS

Role: Advisory Committee Member, Indiana University

Outcome: Program Director, Physical Therapy, St. Ambrose University

2015-2021 Myra Meekins, DPT, PhD, OCS, FAAOMPT

Role: Dissertation Committee Member, Rocky Mountain University

Title: The Effect of Chronic Low Back Pain and Trunk Stabilization on Gluteus Medius Activation During Hip Abduction and Hip Abduction - Lateral Rotation

Outcome: Assistant Professor, The University of Tennessee Health Science Center

2016-2020 Stefanie Foster, PT, PhD

Role: Primary Mentor, Washington University Movement Science Program

Title: Movement System Impairments in Patients with Lower Urinary Tract Symptoms

Outcome: Graduated

2017-2019 Lindsey Brown, DPT, PhD

Role: Dissertation Committee Member, The Ohio State University

Title: Informed Decisions and Patient Outcomes: An Interdisciplinary Approach to Hip Pain

Outcome: Post-doctoral Research Fellow, U.S. Department of Veterans Affairs

2017-2021 Ke Song

Role: Dissertation Committee Member, Washington University Mechanical Engineering & Materials Science

Title: Subject-specific Musculoskeletal Modeling of Hip Dysplasia Biomechanics

Outcome: Postdoctoral Research, University of Pennsylvania School of Medicine

2022- Meenakshi Sundaram, MS, PT

Role: Dissertation Committee Member, School of Health and Rehabilitation Sciences, Dept of Physical Therapy, University of Pittsburgh

Title: TBD

Outcome:

2023-2024 Molly Shepherd, PhD Candidate

Role: Dissertation Committee Member, Washington University Movement Science Program

Title: Factors that Influence Loading in the Dysplastic Hip

Outcome: Graduated

***Graduate Students (Entry level DPT)***

2012-2015 Jackie Hunt, PT, DPT

Role: Mentor for Research Assistantship

Title: Bony Abnormalities of the Hip Joint: A New Comprehensive, Reliable and Radiation-Free Measurement Method Using Magnetic Resonance Imaging.

Outcome: Poster presentation at professional meeting and published manuscript.

2013-2014 Davor Vasiljevic, PT, DPT, MSCI

Role: Mentor, NIH TL1 Predoctoral Clinical Research Trainee, TL1RR024995

Title: Three Dimensional Kinematics of Visually Classified Lower Extremity Movement Patterns During a Single Leg Squat Among People With Chronic Hip Joint Pain

Outcome: Master of Science in Clinical Investigation, poster presentation at professional meeting and published manuscript.

2013-2016 Alex Uding, PT, DPT

Role: Mentor for Research Assistantship

Title: Clinical Tests to Determine Femoral Version Category in People

with Chronic Hip Joint Pain and Asymptomatic Controls

Outcome: Poster presentation at professional meeting and published manuscript.

2014-2015 Eric Schmidt, PT, DPT, MSCI

Role: Mentor, NIH TL1 Predoctoral Clinical Research Trainee, TL1RR024995

Title: Dynamic Knee Valgus Kinematics and Their Relationship to Pain in Women with Patellofemoral Pain Compared to Women With Chronic Hip Joint Pain

Outcome: Master of Science in Clinical Investigation, poster presentation at professional meeting and published manuscript.

2014-2017 Matt Mastenbrook, PT, DPT

Role: Mentor for Research Assistantship

Title: Hip Abductor Muscle Compartment Volume and Strength Differences Between Women with Chronic Hip Joint Pain and Asymptomatic Controls

Outcome: Poster presentation at professional meeting and published manuscript.

2015-2018 Trent Wiseman, PT, DPT

Role: Mentor for Research Assistantship

Title: Ankle Dorsiflexion and 2D Hip, Pelvic, and Trunk Kinematics in Patients with Chronic Hip Joint Pain During Forward Step-Down.

Outcome: Poster presentation at professional meeting

2017-2020 Kristen Koch, PT, DPT

Role: Mentor for Research Assistantship

Title: Comparison between Movement Pattern Training and Strengthening on Muscle Volume and Strength for Hip Pain

Outcome: Poster presentation at professional meeting and published manuscript.

2018-2018 Ji Xuanran

Internship, Biostatistics

2018-2018 Cassie Davis, BA

Biomedical Innovation Program (BMIP), Biomedical Engineering (WUSTL)

2019-2022 Taylor Burlis, PT, DPT

Role: Mentor for Research Assistantship

Title: Musculoskeletal impairments among Women with Lower Urinary Tract Symptoms

Outcome: Poster presentation at professional meeting

2021-2023 Ramya Palaniappan

Role: Mentor, NIH TL1 Predoctoral Clinical Research Trainee

Title: Comparison between Movement Pattern Training and Strengthening on Kinematics and Kinetics in Patients with Chronic Hip-related Groin Pain

Outcome: Manuscript published.

2021-Present Cameron Swick, SPT

Role: Mentor for Research Assistantship

Title: Platform presentation at 2 professional meetings, manuscript in preparation

2022-Present Lauren Froehlich, SPT

Role: Mentor for Research Assistantship

Title: Abstract for professional meeting and manuscript in preparation

***Advisor for Capstone Project (Post-Professional DPT)***

2004 Marcy Schulz, PT, DPT

Title: Physical Therapy Management Following Meniscal Debridement

2007 Gregory Holtzman, PT, DPT

Title: Anterior Knee Pain Secondary to Patella Alta: A Critical Review and Case Study

Outcome: Poster presentation at professional meeting and published manuscript.

2008 Jennifer C. Hoffman, PT, DPT

Title: Taping vs. Bracing for Patellar Glide – Which is More Effective

2009 Cheryl Smith, PT, DPT

Title: Diagnosis and Treatment of Two Patients with Hip Pain Using the Movement System Impairment Classification System”

Outcome: Poster presentation at professional meeting

2009 Gary Sutton, PT, DPT

Title: Influence of Hip Muscle Control in Decreasing Symptoms, Improving Function in a Patient with Osteoarthritis of the Knee.

2011 Sylvia Czuppon, PT, DPT

Title: Physical and Psychological Factors Associated with Return to Sport Following Anterior Cruciate Ligament (ACL) Reconstruction

Outcomes: Poster presentation at professional meeting and published manuscript.

2012 Randy Raugh, PT, DPT

Title: The Effect of Physical Stress to Hyaline Cartilage in the Knee and Implications for Physical Therapy

2013 Steve Olsen, PT, DPT

Title: The Effect of Decrease in BMI on Knee Pain and Function Following Aggressive Fitness Programs

2014 Mike Horan, PT, DPT

What are the Effect of General Lower Extremity Strengthening, Quadriceps Strengthening, Hip Strengthening, and Motor Pattern Training on Pain Scores for the Treatment of Individuals with Patellofemoral Pain?: A Literature Review.”

***Advisor for Independent Study and Independent Readings (Post-Professional DPT)***

2003 Melissa Stevens, PT, DPT

Title: Treatment of a Severe Quadriceps Laceration: A Case Study Based on the Muscle Physiology to Regain Strength and Functional Mobility

2005 Darren Bass, PT, DPT

Title: Comparison of Rehab Outcomes for Postoperative Anterior cruciate Ligament Surgeries Via Various Surgical Techniques

2006 Brigitte Cutler, PT, DPT

Title: Radiological MR Imaging Studies, Low Back Biomechanics and Low Back Pain

2006 Brigitte Cutler, PT, DPT

Title: Spine Surgery: The Physical Therapy Perspective

2006 Karen Krochina, PT, DPT

Title: The Effects of Knee Rotation in the Frontal and Transverse Planes on Knee Pain and Pathology.

***Mentor for Clinical Research:***

2011-2020 Sylvia Czuppon, PT, DPT, OCS, Sports-specific injuries

2017-2020 Kate Glaws, PT, DPT, SCS, Hip-related groin pain

The Ohio State University

2018-2023 Lauren Mills, PT, DPT, SCS, Risk factors for athletic injuries

2021-Present Becky Demargel, PT, DPT, Factors associated with hip-specific function

***Mentor for Clinical Track Faculty***

2024-Present Megan Burgess, PT, DPT

***Advisor for Clinical Fellowship in Diagnosis & Management of Movement Impairment Syndromes, In-Residence and Regional Fellows***

2008-2014 Use of imaging in clinical practice

2020-Present Rehabilitation for Hip Conditions

**Bibliography**

***Original, peer reviewed articles in referred journals***

1. **Harris-Hayes M,** Wendl P, Sahrmann SA, Van Dillen LR. Does tibiofemoral joint movement affect passive hip rotation range of motion? *Physiotherapy Theory and Practice*. 2007;23(6):315-324. PubMed PMID: 18075905.
2. Clohisy JC, Knaus ER, Hunt DM, Pashos GE, **Harris-Hayes M,** Prather H, Lesher J. Clinical presentation of patients with symptomatic anterior hip impingement. *Clinical Orthopaedics & Related Research*. 2009;467:638-644. PMCID: [PMC2635448](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2635448/)
3. **Harris-Hayes M**, Van Dillen LR. The inter-tester reliability of examiners classifying low back pain problems based on the movement system impairment classification system. *Physical Medicine and Rehabilitation*. 2009;1(2):117-126**.** PMCID: [PMC2752279](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2752279/)
4. Prather H, **Harris-Hayes M,** Hunt DM, Steger-May K, Mathew V, Clohisy JC. Reliability and agreement of hip range of motion and provocative physical examination tests in asymptomatic volunteers. PM R. 2010 Oct;2(10):888-95. doi: 10.1016/j.pmrj.2010.05.005. Erratum in: PM R. 2011 Mar;3(3):286. PMID: 20970757; PMCID: PMC3438506.
5. **Harris-Hayes M,** Holtzman GW, Earley JA, Van Dillen LR. Development and preliminary reliability testing of an assessment of patient independence in performing a treatment program: standardized scenarios. J Rehabil Med. 2010 Mar;42(3):221-7. doi: 10.2340/16501977-0505. PMID: 20411216; PMCID: PMC3574865.
6. Hoffman SL, Johnson MB, Zou D, **Harris-Hayes M**, Van Dillen LR. Effect of classification-specific treatment on lumbopelvic motion during hip rotation in people with low back pain. Man Ther. 2011 Aug;16(4):344-50. doi: 10.1016/j.math.2010.12.007. Epub 2011 Jan 20. PMID: 21256073; PMCID: PMC3095730.
7. **Harris-Hayes M,** Steger-May K, Pashos G, Clohisy JC, Prather H. Stride activity level in young and middle-aged adults with hip disorders. *Physiotherapy Theory and Practice.* 2012;5:333-343. PMCID: [PMC3586766](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3586766/).
8. Hunt D, Prather H, **Harris-Hayes M,** Clohisy JC. Clinical outcomes analysis of conservative and surgical treatment of patients with clinical indications of pre-arthritic, intra-articular hip disorders. *Physical Medicine and Rehabilitation*. 2012;4:479-487. PMCID: [PMC3594845](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3594845/).
9. Holtzman G, Harris-Hayes M, Hoffman SL, Zou D, Edgeworth RA, Van Dillen LR. Clinical examination procedures to determine the effect of axial decompression on low back pain symptoms in people with chronic low back pain. J Orthop Sports Phys Ther. 2012 Feb;42(2):105-13. doi: 10.2519/jospt.2012.3724. PMID: 22027267; PMCID: PMC3628684.
10. Klein SE, Dale AM, **Harris-Hayes (Hayes) M,** Johnson JJ, McCormick JE, Racette BA. Clinical presentation and self-reported patterns of pain and function in patients with plantar heel pain. *Foot & Ankle International*. 2012;33(9):693-698*.* PMCID: [PMC4083061](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4083061/)
11. \*Kuhn M, **Harris-Hayes M,** Steger-May K, Pashos G, Clohisy JC. Total hip arthroplasty in patients 50 years or less: Do we improve activity profiles? *Journal of Arthroplasty.* 2013;28(5):872-876*.* PMCID: [PMC3932739](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3932739/).
12. \*Czuppon S,Racette BA, Klein SE, **Harris-Hayes M.** Variables Associated with Return to Sport Following Anterior Cruciate Ligament Reconstruction: A Systematic Review. *British Journal of sports Medicine.* 2014;48(5):356-64. PMCID: [PMC3975129](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3975129/).
13. **Harris-Hayes M,** Willis AW, Klein SE, Czuppon SC, Crowner B, Racette BA. Relative Mortality in United States Medicare Beneficiaries with Parkinson Disease and Hip and Pelvic Fractures. *Journal of Bone and Joint Surgery Am.* 2014;96(4):e27.PMCID: [PMC3918936](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3918936/).
14. **\*Harris-Hayes M,** Steger-May K, Koh C, Royer NK, Graci V, Salsich GB. Classification of Lower Extremity Movement Patterns Based on Visual Assessments: Reliability and Correlation to Two Dimensional Video Analysis. *Journal of Athletic Training*. 2014;49(3):304-310. PMCID: [PMC4080603](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4080603/).
15. **\*Harris-Hayes M,** Commean PK, Patterson JD, Clohisy JC, Hillen TJ. Bony abnormalities of the hip joint: a new comprehensive, reliable and radiation-free measurement method using magnetic resonance imaging.Journal of Hip Preservation Surgery*.* 2014;1:62-70. PMCID: [PMC4280561](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4280561/).
16. **\*Harris-Hayes M**,Mueller MJ, Sahrmann Sa, Bloom NJ, Steger-May K, Clohisy JC, Salsich GB. Persons with chronic hip joint pain exhibit reduced hip muscle strength. *Journal of Orthopaedic and Sports Physical Therapy*. 2014;44:890-898. PMCID: [PMC4216739](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4216739/).
17. \*Nepple JJ, Thomason KM, An TW, **Harris-Hayes M,** Clohisy JCC. The utility of biomarkers for assessing the pathophysiology of hip osteoarthritis: a systematic review. *Clinical Orthopaedics and Related Research.* 2015;473:1683-1701. PMCID: [PMC4385333](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4385333/).
18. **\*Harris-Hayes M,** Czuppon S, Van Dillen LR, Steger-May K, Sahrmann SA, Schootman M, Salsich GB, Clohisy JC, Mueller MJ. Movement pattern training to improve function in people with chronic hip joint pain: a feasibility randomized clinical trial. *Journal of Orthopaedic and Sports Physical Therapy*. 2016;46:452-461. PMCID: [PMC4889512](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4889512/)
19. Van Dillen LR, Norton BJ, Sahrmann SA, Evanoff BA, **Harris-Hayes M**, Holtzman GW, Early J, Chou I, Strube MJ. Efficacy of classification-specific treatment and adherence on outcomes in people with chronic low back pain.  A one-year follow-up, prospective, randomized, controlled clinical trial. *Manual Therapy.* 2016;24:52-64. PMCID: [PMC4921225](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4921225/)
20. \*Czuppon S, Prather H, Hunt DM, Bloom NJ, Clohisy JC, Larsen R, **Harris-Hayes M**. Gender-dependent differences in hip range of motion and impingement testing in asymptomatic college freshman athletes. *PMR.* 2017; 9(7):660-667. PubMed PMID: 27840297; PubMed Central PMCID: [PMC5425325](https://www.ncbi.nlm.nih.gov/pubmed/27840297).
21. \*Mastenbrook MJ, Commean PK, Hillen TJ, Salsich GB, Meyer GA, Mueller MJ, Clohisy JC, **Harris-Hayes M**. Hip abductor muscle compartment volume and strength differences between women with chronic hip joint pain and asymptomatic controls. *Journal of Orthopaedic and Sports Physical Therapy*. 2017;47:923-930. PMCID: [PMC5991486](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5991486/)
22. **\*Harris-Hayes M,** Salsich GB, Steger-May K, Clohisy JC, Van Dillen LR, Schootman M, Czuppon S, Commean PK, Hillen TJ, Sahrmann SA, Mueller, MJ. Reduced hip adduction is associated with improved function after movement pattern training in young people with chronic hip joint pain. *Journal of Orthopaedic and Sports Physical Therapy*. 2018;48:316-324*.* PMCID: [PMC5993213](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5993213/)
23. \*Uding A, Bloom N, Commean PK, Hillen TJ, Patterson JD, Clohisy JC, **Harris-Hayes M**. Clinical Tests to Determine Femoral Version Category in People with Chronic Hip Joint Pain and Asymptomatic Controls. Musculoskeletal Science & Practice. 2019;39:115-122. PMCID: [PMC6353568](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6353568/)
24. \*Schmidt E, **Harris-Hayes M**, Salsich GB. Dynamic knee valgus kinematics and their relationship to pain in women with patellofemoral pain compared to women with chronic hip joint pain. *Journal of Sport and Health Science.* 2019;8:486-493*.* PMCID: [PMC6738932](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6738932/)
25. Brown L, **Harris-Hayes M,** Foraker R, Glaws K, Vasileff WK, Di Stasi S. A Randomized Control Trial Protocol for an Interdisciplinary Evaluation of Non-arthritic Hip Disease. *European Journal for Person Centered Healthcare.* 2019;7(1):133-141*.* PMCID: [PMC6583806](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6583806/)
26. \*Vasiljevic D, Salsich GB, Snozek D, Aubin BG, Foster, SN, Mueller MJ, Clohisy JC, **Harris-Hayes M**. Three dimensional kinematics of visually classified lower extremity movement patterns during a single leg squat among people with chronic hip joint pain. Physiother Theor Pract. 2020:36:5, 598-606, PMCID: [PMC6314906](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC6314906/?tool=mybib)
27. \***Harris-Hayes M**, Hillen TJ, Commean PK, Harris, MD, Mueller MJ, Clohisy JC, Salsich GB. Hip kinematics during single leg tasks in people with and without hip-related groin pain and the association among kinematics, hip muscle strength and bony morphology. J Orthop doi.org/10.1093/ptj/pzaa028Sports Phys Ther. 2020:50;243-251*.* PMCID: [PMC7196020](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC7196020/?tool=mybib).
28. Brown L, Lynch A, Foraker R, **Harris-Hayes M,** Walrod B, Vasileff, WK, Glaws K, Di Stasi S. Physical Therapists and Physicians Evaluate Non-arthritic Hip Disease Differently: Results from a National Survey. *Physical Therapy Journal.* 2020:100;917-932*.* PMCID: [PMC7462046](http://www.ncbi.nlm.nih.gov/pmc/articles/pmc7462046/).
29. **\*Harris-Hayes M,** Steger-May K, Bove A, Foster SN, Mueller MJ. Clohisy JC, Fitzgerald GK. Movement pattern training compared with standard strengthening and flexibility among patients with hip-related groin pain: results of a pilot multicenter randomised clinical trial. *BMJ Open Sport & Exercise Medicine.* 2020;6:e000707/ PMCID: [PMC7254120](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC7254120/?tool=mybib).
30. Schwabe MT, Clohisy JC, Cheng AL, Pascual-Garrdio C, **Harris-Hayes** M, Hunt DM, Harris MD, Prather H, Nepple JJ. Short-term Clinical Outcomes of Hip Arthroscopy Versus Physical Therapy in Patients with Femoroacetabular Impingement: A Systematic Review and Meta- Analysis of Randomized Controlled Trials. Orthop J Sports Med. 2020:8; 232596712096849*.* doi: 10.1177/2325967120968490
31. \*Foster SN, Harris MD, Hastings MK, Mueller MJ, Salsich GB, **Harris-Hayes M**. Static ankle dorsiflexion and hip and pelvis kinematics during forward step-down in patients with hip-related groin pain. *Journal of Sport Rehabilitation*. 2020:30;638-645. PMCID: [PMC8184886](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC8184886/?tool=mybib).
32. Gaffney B, **Harris-Hayes M**, Song K, Clohisy JC, Harris MD. Effect of Simulated Rehabilitation on Hip Joint Loading during Single Limb Squat in Patients with Hip Dysplasia. *Journal of Biomechanics*. 2021:116;110183. PMCID: [PMC7938363](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC7938363/?tool=mybib).
33. \*Foster SN, Spitznagle TM, Tuttle LJ, Sutcliffe S, Lowder JL, Meister N, Ghetti C, Mueller MJ, **Harris-Hayes, M**. Hip and Pelvic Floor Muscle Strength in Women With and without Urgency and Frequency Predominant Lower Urinary Tract Symptoms. *Journal of Women’s Health Physical Therapy.* 2021:45;126-134. PMCID: [PMC8345818](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC8345818/?tool=mybib)**.**
34. **\*Harris-Hayes M**, Steger-May K, M Bove A, Mueller MJ, Clohisy JC, Fitzgerald GK. One-Year Outcomes Following Physical Therapist-led Intervention for Chronic Hip-Related Groin Pain: Ancillary Analysis of a Pilot Multicenter Randomized Clinical Trial. J Orthop Res. 2021;1-10. doi: 10.1002/jor.24985. PMCID: [PMC8285461](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC8285461/?tool=mybib).
35. \*Erbes NA, Foster SN, **Harris-Hayes M**, Spitznagle TM. Movement Impairments in Women with and without Urinary Urgency/Frequency. *Journal of Women’s Health Physical Therapy.* 2021:45;164-173. PMCID: [PMC8741169](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC8741169/?tool=mybib).
36. Brown-Taylor L, **Harris-Hayes M,** Foraker R, Vasileff W, Glaws K, Di Stasi S. Treatment decisions after interdisciplinary evaluation for non-arthritic hip pain: a randomized controlled trial. *Physical Medicine and Rehabilitation.* 2021;1-12*.* DOI: 10.1002/pmrj.12661. [PMCID: PMC8712617](https://pubmed.ncbi.nlm.nih.gov/34181823/)**.**
37. Brown-Taylor L, Pendley C, Glaws K, Vasileff WK, Ryan J, **Harris-Hayes M,** Di Stasi S. Associations Between Movement Impairments and Function and the Influence of Provider Recommendations on Patients’ Decisions to Pursue Physical Therapy. *Physical Therapy Journal.* 2021:1;101(9) PMCID: [PMC8459885](http://www.ncbi.nlm.nih.gov/pmc/articles/pmc8459885/)
38. Harris MD, Shepherd MC, Song K, Gaffney BMM, Hillen TJ, **Harris-Hayes M,** Clohisy JC. The Biomechanical Disadvantage of Dysplastic Hips". *Journal of Orthopaedic Research. 2021;1-10.* [PMCID: PMC8858333](https://doi.org/10.1002/jor.25165)**.**
39. \*Koch K, Semciw AI, Commean PK, Hillen TJ, Fitzgerald GK, Clohisy JC, **Harris-Hayes, M**. Comparison between Movement Pattern Training and Strengthening on Muscle Volume, Muscle Fat and Strength in Patients with Hip-related Groin Pain. *Journal of Orthopaedic Research.* 2021;1-12*.* PMCID: [PMC8825882](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC8825882/?tool=mybib)
40. \*Foster SN, Spitznagle TM, Tuttle LJ, Lowder JL, Sutcliffe S, Steger-May K, Ghetti C, Wang J, Burlis T, Meister N, Mueller MJ, **Harris-Hayes, M**. Pelvic Floor Mobility measured by Transperineal Ultrasound Imaging in Women with and without Urgency and Frequency Predominant Lower Urinary Tract Symptoms. *Journal of Women’s Health Physical Therapy.* 2022;46:100-108*.* PMCID: [PMC9216208](https://pubmed.ncbi.nlm.nih.gov/35757164/)
41. Payne ER, Harris MD, **Harris-Hayes M**, Nahal C, Kamenaga T, Clohisy JC, Pascual-Garrido, C. Greater Hip Abductor Size in Pre-Arthritic Patients with Developmental Dysplasia of the Hip vs. Femoroacetabular Impingement. *Journal of Orthopaedic Research.* 2023;41:852-861*.*DOI: [10.1002/jor.25426](https://doi.org/10.1002/jor.25426)
42. Houston M, Dias N, Peng Y, Spitznagle T, **Harris-Hayes M**, Lai HH, Zhang Y. Gamma-band Inter-muscular Connectivity is Associated with Increased Neural Drive to Pelvic Floor Muscles in Women with Interstitial Cystitis/Bladder Pain Syndrome. *Journal of Urology.* 2023;210:1-6DOI: [10.1097/JU.0000000000003554](https://doi.org/10.1097/ju.0000000000003554)
43. **Harris-Hayes M,** Zorn P, Steger-May K, Burgess MM, DeMargel RD, Kuebler S, Clohisy JC, Haroutounian S. Comparison of Joint Mobilization and Movement Pattern Training for Hip-related Groin Pain: A Pilot Randomized Clinical Trial. *Physical Therapy Journal.* 2023;103:1-13. doi:10.1093/ptj/pzad111. PMCID: [PMC10683042](http://www.ncbi.nlm.nih.gov/pmc/articles/pmc10683042/)
44. Houston M, Dias N, Spitznagle T, **Harris-Hayes M**, Lai HH, Zhang Y. Image Segmentation for High-Density Surface Electromyography Mappings of Pelvic Floor Muscle Activity of Women with Interstitial Cystitis/Bladder Pain Syndrome. 2023 45th Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC), 1-4, IEEE, 2023/7/24
45. \*PalaniappanR, HarrisMD, Steger-May K, BoveAM, Fitzgerald GK, ClohisyJC, **Harris-HayesM**. Comparison between Movement Pattern Training and Strengthening on Kinematics and Kinetics in Patients with Chronic Hip-related Groin Pain. Journal of Applied Biomechanics. J Appl Biomech. 2023 Nov 8:1-7. doi: 10.1123/jab.2022-0304.
46. \*Demargel, RD, Haroutounian S, Steger-May K, Zorn P, Clohisy JC, **Harris-Hayes M**. Patient-specific Factors and Baseline Function in Patients with Chronic Hip Related Groin Pain. *BMJ Open Sport & Exercise Medicine.* 2023;9:e001685. PMCID: [PMC10626773](http://www.ncbi.nlm.nih.gov/pmc/articles/pmc10626773/)
47. Probst DT, Sookochoff MF, **Harris-Hayes M**, Prather H, Lipsey KL, Cheng AL. What is the Rate of Response to Non-operative Treatment for Hip-Related Pain: A Systematic Review and Meta-analysis. *J Orthop Sport Phys Ther.* 2023;53:286-306*.* PMCID: [PMC10176100](https://pubmed.ncbi.nlm.nih.gov/36892224/)**.**
48. **Harris-Hayes M,** Zorn P, Steger-May K, Buss J, Burgess MM, DeMargel RD, Clohisy JC, Haroutounian S. Comparison of Joint Mobilization and Movement Pattern Training for Hip-related Groin Pain: Ancillary Analysis to Assess 12 Month Outcomes of a Pilot Randomized Clinical Trial. *Journal of Orthopaedic and Sports Physical Therapy.* 2023 Nov 4;103(11):pzad111. PMCID: [PMC10683042](http://www.ncbi.nlm.nih.gov/pmc/articles/pmc10683042/)
49. \*Meekins, M. M., Zucker-Levin, A., **Harris-Hayes, M**., Singhal, K., Huffman, K., & Kasser, R. (2024). The effect of chronic low back pain and lumbopelvic stabilization instructions on gluteus medius activation during sidelying hip movements. *Physiotherapy Theory and Practice*, 1–8. https://doi.org/10.1080/09593985.2024.2357130

***Case Reports***

1. **Harris-Hayes M,** Sahrmann SA, Van Dillen LR. Classification, treatment, and outcomes of a patient with lumbar extension syndrome. *Physiotherapy Theory and Practice*. 2005;21(3):181-196. PubMed PMID: 16389699.
2. **Harris-Hayes M,** Sahrmann SA, Norton BJ, Salsich GB. Diagnosis and management of a patient with knee pain using the movement system impairment classification system. *Journal of Orthopaedic and Sports Physical Therapy.*  2008;38(4):203-213. PubMed PMID: 18434664.
3. \*Holtzman GW, **Harris-Hayes M.** Treatment of patella alta with taping, exercise, mobilization and functional activity modification: a case report. *Physiotherapy Theory and Practice*. 2012;29(1):71-88. PMCID: [PMC3961060](http://www.ncbi.nlm.nih.gov/pmc/articles/pmc3961060/).

***Reviews, Chapters and Editorials***

1. Desphande AJ, **Harris-Hayes M,** Schootman M. Epidemiology of diabetes and diabetes-related complications. *Physical Therapy.* 2008;88(11):1254-1264. PMCID: PMC3870323.
2. **Harris-Hayes M,** Van Dillen LR. Relationship between the hip and low back pain in athletes who participate in rotation-related sports. *Journal of Sport Rehabilitation*. 2009;18:60-75. PMCID: PMC2699456.
3. Cibulka MT, White DM, Woehrle J, **Harris-Hayes M,** Enseki K, Fagerson TL, Slover J, Godges JJ. Hip pain and mobility deficits--hip osteoarthritis: clinical practice guidelines linked to the international classification of functioning, disability, and health from the orthopaedic section of the American Physical Therapy Association. J Orthop Sports Phys Ther. 2009 Apr;39(4):A1-25. doi: 10.2519/jospt.2009.0301. PMID: 19352008; PMCID: PMC3963282.
4. **\*Harris-Hayes M,** Royer NK. Relationship of acetabular dysplasia and femoroacetabular impingement to hip osteoarthritis: a focused review. *Physical Medicine and Rehabilitation*. 2011 Nov;3(11):1055-1067.e1. PMCID: [PMC3427648](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3427648/).
5. **\*Harris-Hayes M,** Cornbleet SL, Holtzman GW**.** Movement system syndromes of the knee. In: Sahrmann, SA. *Movement System Impairment Syndromes of the Extremities, Cervical and Thoracic Spines.* St. Louis, MO: Elsevier; 2011:354-438.
6. \*Holtzman GW, **Harris-Hayes M.** Staging System for Rehabilitation. In: Sahrmann, SA. *Movement System Impairment Syndromes of the Extremities, Cervical and Thoracic Spines.* St. Louis, MO: Elsevier; 2011:35-50.
7. **Harris-Hayes M,** McDonough CM, Leunig M, Lee CB, Callaghan JJ, Roos EM. Clinical outcomes assessment in clinical trials to assess treatment of femoroacetabular impingement: use of patient-reported outcome measures. *Journal of American Academy Orthopaedic Surgeons*. 2013;21(Suppl 1):S39-46. PMCID: [PMC3971004](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3971004/).
8. \*Enseki K, **Harris-Hayes M**, White DM, Cibulka MT, Woehrle J, Fagerson TL, Clohisy JC. Non-arthritic Hip Joint Pain: Clinical Practice Guidelines Linked to the International Classification of Functioning, Disability, and Health from the Orthopaedic Section of the American Physical Therapy Association. *Journal of Orthopaedic and Sports Physical Therapy*. 2014;44(6):A1-A32. PMCID: [PMC4399382](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4399382/).
9. \*Bloom NJ, Clohisy JC, **Harris-Hayes, M.** Post-surgical rehabilitation after femoroacetabular impingement treatment, labral repair and labral debridement. In: Reider B, Davies G, Provencher MT, eds. Post-surgical rehabilitation after femoroacetabular impingement treatment, labral repair and labral debridement St. Louis, MO: Elsevier. 2015:868-894.
10. \*Bove AM, Clohisy J, DeWitt J, Di Stasi S, Enseki K, **Harris-Hayes M,** Lewis CL, Reiman MP, Ryan JM. Cost-effectiveness Analysis of Hip Arthroscopic Surgery and Structured Rehabilitation Alone in Individuals With Hip Labral Tears: Letter to the Editor.2017;45:NP1-NP2. PMID: 28272934.
11. American Academy of Orthopaedic Surgeons. Appropriate Use Criteria for the Management of Osteoarthritis of the Hip. [www.aaos.org/oahipauc](http://www.aaos.org/oahipauc). Published December 8, 2017.
12. **\*Harris-Hayes M**, Spitznagle T, Probst D, Foster SN, Prather H. A Narrative Review of Musculoskeletal Impairments Associated with Non-specific Chronic Pelvic Pain. *Physical Medicine and Rehabilitation.* 2019;11:S73-S82.PMCID: [PMC7067540](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC7067540/?tool=mybib)
13. **\*Harris-Hayes M**, Schootman M, Schootman JC, Hastings MK. The Role of Physical Therapists in the Type 2 Diabetic Epidemic. *Journal of Orthopaedic and Sports Physical Therapy.* 2020;50:5-16*.* PMCID: PMC7069691
14. Kemp J, Risberg MA, Mosler A, **Harris-Hayes M,** Serner A, Moksnes H, Bloom N, Crossley K, Gojanovic Boris, Hunt M, Ishøi L, Mathieu N, Mayes S, Scholes M, Friedman D, Ageberg E, Agricola R, Casartelli N, Diamond L, Dijkstra H, Di Stasi S, Drew M, Freke M, Griffin D, Heerey J, Hölmich P, Impellizzeri F, Jones D, Kassarjian A, Khan K, King M, Leunig M, Lewis C, Warholm K, Reiman M, Semciw A, Thorborg K, Klij P, Wörner T, Bizzini M. Physiotherapist-led treatment for young to middle-aged active adults with hip-related pain: Consensus recommendations from the International Hip-related Pain Research Network, Zurich 2018. *British Journal of Sports Medicine.* 2020;54:504-511*.* DOI: [10.1136/bjsports-2019-101458](https://doi.org/10.1136/bjsports-2019-101458)
15. Mosler AB, Kemp JL, King MG, Lawrenson PR, Semciw A, Freke M, Jones D, Casartelli NC, Wörner T, Ishøi L, Ageberg E, Diamond LE, Hunt MA, Di Stasi S, Reiman M, Drew MK, Friedman D, Thorborg K, Leunig M, Bizzini M, Khan KM, Crossley KM, Agricola R, Bloom N, Dijkstra P, Griffin D, Gojanovic B, **Harris-Hayes M,** Heerey JJ, Hölmich P, Impellizzeri F, Kassarjian A, Marstrand K, Mayes S, Moksnes H, Risberg MA, Scholes M, Serner A, van Klij P, Lewis CL. Standardised measurement of physical capacity in young and middle-aged active adults with hip-related pain: Recommendations from the 1st International Hip-related Pain Research Network (IHiPRN) meeting, Zurich 2018. *British Journal of Sports Medicine.* 2020;54:702-710. DOI: [10.1136/bjsports-2019-101457](https://doi.org/10.1136/bjsports-2019-101457)
16. Reiman M, Agricola R, Kemp J, Heerey J, Weir A, Klij P, Kassarjian A, Mosler A, Ageberg E, Hölmich P, Warholm K, Griffin D, Mayes S, Khan K, Crossley Kay, Bizzini M, Bloom N, Casartelli N, Diamond L, Di Stasi S, Drew M, Friedman D, Freke M, Gojanovic B, Glyn-Jones S, **Harris-Hayes M**, Hunt M, Impellizzeri F, Ishøi L, Jones D, King M, Lawrenson P, Leunig M, Lewis C, Mathieu N, Moksnes H, Risberg MA, Scholes M, Semciw A, Serner A, Thorborg K, Wörner T, Dijkstra, Hendrik. Consensus recommendations on the classification, definition and diagnostic criteria of hip-related pain in young and middle-aged active adults from the International Hip-related Pain Research Network, Zurich 2018. *British Journal of Sports Medicine.* 2020;54:631-641*.* DOI: [10.1136/bjsports-2019-101453](https://doi.org/10.1136/bjsports-2019-101453)
17. Impellizzeri FM, Jones DM, Griffin D, **Harris-Hayes M**, Thorborg K, Crossley KM, Reiman MP, Scholes MJ, Ageberg E, Agricola R, Bizzini M, Bloom N, Casartelli NC, Diamond LE, Dijkstra HP, Di Stasi S, Drew M, Friedman DJ, Freke M, Gojanovic B, Heerey JJ, Hölmich P, Hunt MA, Ishøi L, Kassarjian A, King M, Lawrenson PR, Leunig M, Lewis CL, Warholm KM, Mayes S, Moksnes H, Mosler AB, Risberg MA, Semciw A, Serner A, van Klij P, Wörner T, Kemp J. [Patient-reported outcome measures for hip-related pain: a review of the available evidence and a consensus statement from the International Hip-related Pain Research Network, Zurich 2018.](https://pubmed.ncbi.nlm.nih.gov/32066573/) Br J Sports Med. 2020 Jul;54(14):848-857. doi: 10.1136/bjsports-2019-101456. Epub 2020 Feb 17. PMID: 32066573
18. Reiman MP, Agricola R, Kemp JL, Heerey JJ, Weir A, van Klij P, Kassarjian A, Mosler AB, Ageberg E, Hölmich P, Warholm KM, Griffin D, Mayes S, Khan KM, Crossley KM, Bizzini M, Bloom N, Casartelli NC, Diamond LE, Di Stasi S, Drew M, Friedman DJ, Freke M, Glyn-Jones S, Gojanovic B, **Harris-Hayes M**, Hunt MA, Impellizzeri FM, Ishøi L, Jones DM, King MG, Lawrenson PR, Leunig M, Lewis CL, Mathieu N, Moksnes H, Risberg MA, Scholes MJ, Semciw AI, Serner A, Thorborg K, Virgile A, Wörner T, Dijkstra HP. Infographic. Consensus recommendations on the classification, definition and diagnostic criteria of hip-related pain in young and middle-aged active adults from the International Hip-related Pain Research Network, Zurich 2018. Br J Sports Med. 2021 Jan;55(2):115-117. doi: 10.1136/bjsports-2020-102219. Epub 2020 Aug 31. PMID: 32868314
19. McDonough CM, **Harris-Hayes M**, Kristensen MT, Overgaard JA, Herring TB, Kenny AM, Mangione KK. Physical Therapy Management of Older Adults with Hip Fracture. J Orthop Sports Phys Ther. 2021;51:CPG1-CPG81. doi: 10.2519/jospt.2021.0301. PMID: 33522384.
20. Enseki KR, Bloom NJ, Harris-Hayes, Cibulka, MT, Disantis A, Di Stasi S, Malloy P, Clohisy JC, Martin RL. Hip Pain and Movement Dysfunction Associated With Nonarthritic Hip Joint Pain: A Revision. Journal of Orthopaedic & Sports Physical Therapy. 2023:53I;CPG1-CPG70. doi.org/10.2519/jospt.2023.11666

***Non-refereed publications***

1. **\*Harris-Hayes M,** Enseki D, Bloom N. Femoroacetabular impingement – non-surgical management clinical summary. *PTNow, American Physical Therapy Association.* <http://www.ptnow.org/clinical-summaries-detail/femoroacetabular-impingement-nonsurgical-managemen>
2. **\*Manual of Definitions: Young Adult Hip Group.** Document used internally in Department of Orthopaedic Surgery and Program in Physical Therapy for clinician training. 2010
3. Harris-Hayes M. Perspectives for Practice. [Physical Therapy After a Low-Energy Hip Fracture in Older Adults: Using the Evidence to Guide Physical Therapist Practice](https://u4917055.ct.sendgrid.net/ls/click?upn=AchjOrx-2Bkq-2FsEj4poX9gKj8grRx1Z0D4v5SAdFA3SfeW1u-2FSobI4Ugqaz5hhekMeMnqd-2B54hW9-2B2LTEyD0ddZBeZwzn3zZqk1GPd8yNs6eQ-3DbMJ4_Z1EGZfWl8f-2BCNI6kMYWgcy4B0wcIOKI47QToqGWyLDTd3Fl7unCH-2FVuloqa8z4HjVdqqsIO4D0Ng-2BurQC6cv2TZum9a76dLPNFzlNxl-2FmDUWehcueRg2Qn7aVBseVmdndbeEKWwawcuJvcr-2BNkmww5srX3iemNRufzfVuK8wvNVX6l1DD85wR1KsHBRml9ipK-2B6JUTyx8g9dL9u4LGuWbaE3xliSHFM4SozPoga-2FVDe-2FAJkKl-2FwiIWQ94fWcC-2BM7h7z7H2BNgRCONgkc8w-2FznrOfk5qNuf1WUCumPa9d9Kk-3D). *J Orthop Sports Phys Ther* 2021;51(2):60–61. doi:10.2519/jospt.2021.0501
4. McDonough et al. Physical Therapy After Hip Fracture in Older Adults: What New Guidelines Mean for You. *J Orthop Sports Phys Ther* 2021;51(2):62. doi:10.2519/jospt.2021.0502
5. APTA Physical Therapy Guide to Hip Osteoarthritis: ChoosePT.com Consumer Symptoms & Conditions Guide 2023. <https://www.choosept.com/guide/physical-therapy-guide-to-osteoarthritis-of-hip>

***Abstracts***

1. **Harris MH,** Sahrmann SA, Van Dillen LR. Treatment of a Patient with Lumbar Extension Syndrome: A Case Report. *Journal of Orthopaedic and Sports Physical Therapy.* 2001;31(1):A30.
2. **Harris-Hayes M**, Norton BJ, Salsich GB, Sahrmann SA. Differential diagnosis of a patient with patellofemoral pain using the movement system balance classification system. *Journal of Orthopaedic and Sports Physical Therapy*. 2004;34(1):A31.
3. **Harris-Hayes M,** Wendl P, Sahrmann SA, Van Dillen LR. Does Tibiofemoral joint movement affect passive hip rotation range of motion? *Journal of Orthopaedic and Sports Physical Therapy*. 2004;35(1):PO207.
4. **Harris-Hayes M**, Van Dillen LR. The intertester reliability of examiners classifying low back pain problems based on the movement system impairment classification system. *Journal of Manual & Manipulative Therapy*. 2007;15(3):182.
5. \*Holtzman GW, **Harris-Hayes M**. Conservative treatment of patella alta: a case study. *Journal of Orthopaedic and Sports Physical Therapy*. 2008;38(1):OPO105.
6. **Harris-Hayes M,** Holtzman GW, Earley J, Van Dillen LR. Intra- and inter-rater reliability of physical therapists to assess a patient's independence in performing a treatment program: simulated patient scenarios. *Journal of Orthopaedic and Sports Physical Therapy*. 2008;38(1):OPO170.
7. **Harris-Hayes M,** Van Dillen LR, Strube MJ. A system for measuring patient knowledge and patient performance of a treatment program. *Journal of Orthopaedic and Sports Physical Therapy*. 2008;38(1):OPO173.
8. Holtzman GW, **Harris-Hayes M**, Van Dillen LR. Clinical exam procedures for unloading the lumbar region: effects in people with chronic low back pain. *Journal of Orthopaedic and Sports Physical Therapy*. 2009;39(1):OPL47.
9. **Harris-Hayes M,** Van Dillen LR. Comparison of two subgroups of patients with chronic low back pain classified with the Movement System Impairment Classification System. *Journal of Orthopaedic and Sports Physical Therapy*. 2009;39(1):OPL21.
10. Hoffman SL, **Harris-Hayes M,** Zou D, Baxter KR, Tateuchi H, Van Dillen LR. Spinal and hip flexion end-range of motion with forward bending in two low back pain subgroups based on the Movement System Impairment model. *Journal of Orthopaedic and Sports Physical Therapy*. 2010;40(1):A76.
11. Hoffman SL, **Harris-Hayes M,** Zou D, Baxter KR, Tateuchi H, Van Dillen LR. Pattern of movement during return from forward bending in two low back pain subgroups based on the Movement System Impairment model. *Journal of Orthopaedic and Sports Physical Therapy*. 2010;40(1):A77.
12. \*Smith C, Bloom N, Sahrmann SA, **Harris-Hayes M.** Diagnosis and treatment of two patients with hip pain using the Movement System Impairment classification system. *Journal of Orthopaedic and Sports Physical Therapy*. 2010;40(1):A64.
13. \*Prather H, Clohisy JC, **Harris-Hayes M,** Hunt D, Sheng A**,** Van Dillen LR. Hip range of motion for specific hip disorders: an important parameter to assess in patients with low back pain. *Physical Medicine and Rehabilitation*. 2011;3:S248.
14. \*Czuppon S, **Harris-Hayes M.** Physical and Psychological Outcomes Following Anterior Cruciate Ligament Reconstruction: A Case Report Comparison. *Journal of Orthopaedic and Sports Physical Therapy*. 2012;42(1):OPL48.
15. **\*Harris-Hayes M,** Commean PK, Wessell DE, Hillen TJ, Hunt JD, Clohisy JC. The association of femoral retroversion and intra-articular hip disorders: a matched study. *Journal of Orthopaedic and Sports Physical Therapy*. 2012;42(1):OPL10.
16. \*Czuppon S, Racette BA, Klein SE, **Harris-Hayes M**. Physical and Psychological Variables Associated With Return to Sport Following Anterior Cruciate Ligament Reconstruction: A Systematic Review. *Journal of Orthopaedic and Sports Physical Therapy*. 2013;43(1):SPO1163.
17. **\*Harris-Hayes M**, Mueller MJ, Steger-May K, Sahrmann SA, Salsich GB. Reduced hip muscle strength in patients with pre-arthritic hip disease. *Journal of Orthopaedic and Sports Physical Therapy*. 2013;43(1):OPL58*.*
18. **\*Harris-Hayes M**, Commean PK, Hunt JD, Clohisy JC, Hillen TJ. Bony abnormalities of the hip joint: measurement reliability using magnetic resonance imaging. *Journal of Orthopaedic and Sports Physical Therapy*. 2013;43(1):OPO3196.

Also presented at WUSM Musculoskeletal Research Symposium and MPTA Spring meeting.

1. **\*Harris-Hayes M,** Vasiljevic D, Mueller MJ, Clohisy JC, Salsich GB. Hip and pelvis kinematics during a single leg squat in people with and without pre-arthritic hip disease: preliminary data. Conference Proceedings, Gait and Clinical Motion Analysis Society Annual Conference. May 2013, pp 331-332.
2. **\*Harris-Hayes M,** Czuppon S, Van Dillen LR, Sahrmann SA, Schootman M, Salsich GB, Clohisy JC, Mueller, MJ. Movement pattern training for pre-arthritic hip disease. Conference Proceedings, 8th Annual NIH Pain Consortium Symposium on Advances in Pain Research. May 2013.
3. **\*Harris-Hayes M,** Czuppon S, Van Dillen LR, Sahrmann SA, Schootman M, Salsich GB, Clohisy JC, Mueller, MJ. Movement pattern training improves function in people with pre-arthritic hip disease: preliminary data. *Journal of Orthopaedic and Sports Physical Therapy.* 2014;44(1):OPO3159.
4. **\*Harris-Hayes M,** Czuppon S, Van Dillen LR, Steger-May K, Sahrmann SA, Schootman M, Salsich GB, Clohisy JC, Mueller MJ. Movement pattern training improves function in people with intra-articular hip disorders: a preliminary study. *presented American Association of Hip and Knee Surgeons*. November 2014.

Also presented at

8th Annual Multidisciplinary Research Conference, Barnes-Jewish Hospital. September 2014

Osteoarthritis Research Society International meeting. April 2015.

1. \*Vasiljevic D, Salsich GB, Aubin BG, Mueller MJ, Clohisy JC, **Harris-Hayes M.** Three-dimensional movement pattern characteristics in people with pre-arthritic hip disease. *Journal of Orthopaedic and Sports Physical Therapy.* 2015;45(1):A132.

Also presented TL1 Annual Conference.

1. \*Czuppon S, Prather H, Hunt DM, Bloom NJ, Clohisy JC, **Harris-Hayes M.** Are there sex-dependent differences in hip range of motion and impingement testing in asymptomatic college freshman athletes? *Journal of Orthopaedic and Sports Physical Therapy.* 2015;45(1):A157.
2. \*Uding AR, Bloom NJ, Commean PK, Hillen TJ, Patterson JD, **Harris-Hayes M.** Clinical tests to determine femoral version category in people with chronic hip joint pain and asymptomatic controls. *Journal of Orthopaedic and Sports Physical Therapy.* 2015;45(1):A27.
3. **\*Harris-Hayes M,** Czuppon S, Van Dillen LR, Steger-May K, Sahrmann SA, et al. Movement pattern training improves function in people with intra-articular, prearthritic hip disease: preliminary data. World Congress on Osteoarthritis (OARSI), Seattle, WA. Osteo Cart. 2015;23(Suppl 2):A369.
4. \*Schmidt E, Harris-Hayes M, Salsich GB. Dynamic Knee Valgus Kinematics: Patellofemoral Pain and Prearthritic Hip Disease. *Presented TL1 Annual Conference.* April 2015
5. \*An TW, Sadhu A, Pashos G, **Harris-Hayes M,** Clohisy JC. Symptomatic Acetabular Dysplasia in the Skeletally Mature Patient: Is the Contralateral Hip at Risk? *American Association of Hip and Knee Surgeons*. November 2015.
6. \*Mastenbrook MJ, Commean PK, Hillen TJ, Salsich GB, Mueller MJ, Clohisy JC, **Harris-Hayes M**. Hip abductor volume and strength differences between women with prearthritic hip disorders and asymptomatic controls. *Journal of Orthopaedic and Sports Physical Therapy.* 2016;46(1):A113-114.

Also presented at

Musculoskeletal Winter Symposium, Musculoskeletal Research Center at Washington University School of Medicine. February 2016.

1. **\*Harris-Hayes M,** Salsich GB, Steger-May K, Clohisy JC, Van Dillen LR, Schootman M, Czuppon S, Commean PK, Hillen TJ, Sahrmann SA, Mueller, MJ. Reduced hip adduction is associated with improved function after movement pattern training in people with prearthritic hip disease. World Congress on Osteoarthritis (OARSI), Amsterdam, Netherlands. Osteo Cart. 2016;24:S468-469.
2. \*Foster SN, Harris MD, Hastings MK, Mueller MJ, Wiseman T, Huber N, **Harris-Hayes M.** Ankle Dorsiflexion and 2D hip, pelvic, and trunk kinematics in patients with chronic hip joint pain during forward step-down.  *Journal of Orthopaedic and Sports Physical Therapy.* 2018;48(1):A111.
3. **\*Harris-Hayes M**, Bove A, Brown K, Burgess M, King V, Mancino J, Wortman D, Fitzgerald GK. Treatment fidelity among treatment providers in a multicenter, randomized clinical trial comparing two rehabilitation strategies for people with prearthritic hip disease. *Journal of Orthopaedic and Sports Physical Therapy.* 2018;48(1):A121-122.
4. Brown L, Glaws K, **Harris-Hayes M**, Vasileff WK, Di Stasi S. Feasibility of an Interdisciplinary Clinic for Patients with Non-arthritic Hip Disease. Presented at Ohio Physical Therapy Association, 2018.
5. **\*Harris-Hayes M,** Steger-May K, Bove A, Foster SN, Mueller MJ. Clohisy JC, Fitzgerald GK. Movement pattern training compared to standard strengthening and flexibility among patients with prearthritic hip disorders: a pilot multicenter randomized clinical trial. World Congress on Osteoarthritis (OARSI), Toronto, ON. Osteo Cart. 2019;27:S441-S442.
6. Schwabe, Cheng, Pascual-Garrdio, Harris-Hayes, Hunt, Prather, Clohisy, Nepple. Hip Arthroscopy vs. Physiotherapy in Patients with Femoroacetbular Impingement: A Systematic Review and Meta-Analysis of Randomized Controlled Trials, ISHA, 2019.
7. Gaffney BMM, **Harris-Hayes M,** Clohisy JC, Harris MD. Effect of Simulated Abductor Muscle Strengthening on Joint Loading in Hip Dysplasia. Accepted to present at ISB 2019.
8. \*Foster SN, Spitznagle TM, Tuttle LJ, Sutcliffe S, Lowder JL, Meister N, Ghetti C, Mueller MJ, **Harris-Hayes, M**. Hip and Pelvic Floor Strength in Women with and without Urinary Urgency/Frequency: Preliminary Results. [CSM Abstract 22299]. *J Womens Health Phys Therap*. 2020;44(1).
9. \*Foster SN, **Harris-Hayes M**, Spitznagle TM. Movement impairments in women with and without urinary urgency/frequency: preliminary results. [CSM Abstract 23320]. *J Womens Health Phys Therap*. 2020;44(1). *In press.*
10. Brown L, **Harris-Hayes M**, Vasileff W, Foraker R, Jackson R, Di Stasi S. Decisional Conflict Changes after Evaluation in a Hip Preservation Clinic. *Accepted for Platform Presentation at the American Physical Therapy Association Combined Sections Meeting 2020*.
11. \*Cook R, Fitzgerald GK, Foster SN, Mueller MJ, Clohisy JC, **Harris-Hayes, M**. Gender Differences in Movement During Single Leg Tasks in People with Hip-Related Groin Pain. *J Orthop Sports Phys Ther.* 2020;50(1):CSM5.
12. \*Koch K, Commean PK, Hillen TJ, Mueller MJ, Clohisy JC, **Harris-Hayes, M**. Comparison between Movement Pattern Training and Strengthening on Muscle Volume and Strength for Hip Pain. *J Orthop Sports Phys Ther.* 2020;50(1):CSM13.
13. Gaffney B, Song K, **Harris-Hayes M**, Clohisy JC, Harris MD. Influence of Hip Kinematic Perturbations During Walking On Joint Loading In Patients With Acetabular Dysplasia. *Orthopaedic Research Society. February 2020.*
14. **\*Harris-Hayes M,** Steger-May K, Bove A, Foster S, Mueller MJ, Clohisy JC, Fitzgerald GK. Sustained outcomes following movement pattern training or strengthening/flexibility among patients with prearthritic hip disorders: results of a pilot multicenter randomized clinical trial. *Osteo Cart.* 2020:28;S171-S172. DOI: <https://doi.org/10.1016/j.joca.2020.02.279>
15. Tulchin-Francis K, Anderson A, Backus S, Catelli D, **Harris-Hayes M**, Lamontagne M, Lewis C, Podeswa D. A multi-task, multi-center motion analysis protocol: reliability assessment in healthy individuals. *Gait Post.* 2020:81;365-366*.*
16. Gaffney B, **Harris-Hayes M**, Song K, Clohisy JC, Harris MD. Effect of Movement Training on the Location of Acetabular Loading in Developmental Dysplasia of the Hip. *Conference Proceedings, American Society of Biomechanics 2020.*
17. **\*Harris-Hayes M,** Steger-May K, Bove AM, Mueller MJ, Clohisy JC, Fitzgerald GK. Sustained effects of rehabilitation among patients with hip-related groin pain: secondary analysis from a pilot randomized clinical trial. *Conference Proceedings, International Society for Hip Arthroscopy* 2020.
18. **\*****Harris-Hayes M**, Zorn P, Clohisy JC, Haroutounian S. Psychosocial measures, movement evoked pain and pressure hypersensitivity among patients with chronic hip-related groin pain. *J Orthop Sports Phys Ther.* 2021;51(1):OPL19.
19. Meekins MM, Clifft J, Zucker-Levin A, **Harris-Hayes M,** Kasser R. Effectiveness of Lumbopelvic Stabilization Methods on Gluteal Muscle Recruitment during Hip Movement: A Systematic Review. *2021 AAOMPT Annual Conference*
20. Payne E, Pascual-Garrido C, Harris MD, **Harris-Hayes M**, Nahal C, Kamenaga T, Clohisy JC. Assessment of Hip Abductor Muscle Volume Confirms Increased Cross-Sectional Area in Dysplastic Hips. *2021 AAHKS Annual Meeting, Dallas, TX.*
21. **\*Harris-Hayes** M, Zorn P, Steger-May K, Gu H, Burgess MM, DeMargel RD, Kuebler S, Clohisy JC, Haroutounian S. Comparison of Movement Pattern Training and Joint Mobilization for Chronic Prearthritic Hip Disorders: A Pilot Randomized Clinical Trial. World Congress on Osteoarthritis (OARSI), Berlin, Germany. Osteo Cart. 2022;30:S398-S399.
22. \*Foster SN, Spitznagle TM, Tuttle LJ, Sutcliffe S, Lowder JL, Meister N, Ghetti C, Mueller MJ, **Harris-Hayes, M**. Musculoskeletal impairments among Women with Urinary Urgency/Frequency. *ICTS Annual Symposium 2022.*
23. Ivens R, Harris-Hayes M, Lawrence RL. The impact of altering scapular kinematics on the proximity between the rotator cuff footprint and the glenoid. *American Shoulder and Elbow Therapists Society meeting. Oct 2022, Atlanta, GA*
24. Lawrence RL, Ivens R, Harris-Hayes M. The effect of scapular kinematics on mechanisms of rotator cuff injury: subacromial impingement. *CSM 2023*
25. Lawrence RL, Ivens R, Harris-Hayes M. The effect of scapular kinematics on mechanisms of rotator cuff injury: internal impingement. CSM 2023
26. **\*Harris-Hayes** M, Zorn P, Steger-May K, Buss J, Burgess MM, DeMargel RD, Kuebler S, Clohisy JC, Haroutounian S. One year outcomes following rehabilitation for chronic hip-related groin pain: ancillary analysis of a pilot randomized clinical trial. World Congress on Osteoarthritis (OARSI), Denver, Colorado. Osteo Cart. 2023;28:S171-S172.
27. Houston M, Dias N, Spitznagle T, Benoit J, Lai H. H, **Harris-Hayes M**, and Zhang Y. Image segmentation for high-density surface electromyography mappings of pelvic floor muscle activity of women with interstitial cystitis/bladder pain syndrome 45th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC 2023) at the ICC Sydney, Australia, on July 24-28, 2023
28. Burgess, Johnson, Norton, Bloom, **Harris-Hayes.** Using movement to guide curriculum development in entry-level physical therapy education. CSM 2024 Poster, Boston, MA.
29. \*Swick CHK, Harris MD, Froehlich L, **Harris-Hayes M**. Sex difference During Star Excursion Balance Test in Individuals with Hip-Related Groin Pain. CSM 2024 Platform, Boston, MA.

Also presented at

29th Annual Graduate Research Symposium at Washington University in St. Louis. March 2024. 3rd place in the professional students’ category.

1. **\*****Harris-Hayes** M, Zorn P, Steger-May K, Buss J, Burgess MM, DeMargel RD, Clohisy JC, Haroutounian S. Patient Improvements Are Maintained One Year after Rehabilitation for Chronic Hip-Related Groin Pain: Pilot Trial CSM 2024 Platform, Boston, MA. *J Orthop Sports Phys Ther Open.* 2024;2(2):OPL21.
2. **\*Harris-Hayes** M, Buss J, Zorn P, DeMargel RD, Clohisy JC, Cheng A, Steger-May K. Association of Personal Factors and One Year Rehabilitation Outcomes for Chronic Hip-Related Groin Pain. CSM 2024 Platform, Boston, MA.
3. Houston M, Dias N, Spitznagle T, Harris-Hayes M, Lai HH, Zhang, Y. Pelvic floor muscle overactivity of women with interstitial cystitis/bladder pain syndrome increases with pain widespreadness. International Continence Society (ICS), Toronto, 2023.
4. Chadderdon A, Shepherd M, **Harris-Hayes M,** Harris M. Can instrumented insoles detect hip and knee medial collapse? American Society of Biomechanics (ASB) 2023.
5. **Harris-Hayes M.** Injuries and Pain, We Can Do Better; Unleashing the Power of Movement

ABRCMS 2024, Pittsburgh, PA – submitted.