Gregory E. Hicks PT, PhD, FAPTA, FGSA

Professor, Department of Physical Therapy

Associate Vice President for Clinical and Translational Research, University of Delaware PI and Director, Delaware Clinical and Translational Research ACCEL Program

Date: September 2021

Work Contact Info:

University of Delaware Department of Physical Therapy 540 S. College Ave, STAR Campus Newark, DE 19713 Phone: (302) 831-2690 Email: ghicks@udel.edu

Education

Institution	Degree	Years	Field of Study
University of Delaware,	BA	1988-1992	Biological Sciences
Newark, DE			
University of Delaware,	BA	1992-1993	English (Business/Technical Writing)
Newark, DE			
University of Delaware,	MPT	1993-1995	Physical Therapy
Newark, DE			
University of Pittsburgh,	PhD	1998-2002	Rehabilitation Science
Pittsburgh, PA			Advisor: Anthony Delitto, PT, PhD,
			FAPTA

Post Graduate Education and Training

2002-2004 Post-Doctoral Fellowship in Epidemiology of Aging, National Institute on Aging—National Institutes of Health, Longitudinal Studies Section, Clinical Research Branch, Baltimore, MD, Mentors: Luigi Ferrucci MD, PhD and Eleanor Simonsick, PhD

Licensure: Delaware Physical Therapist #J1 0000993

Work Experience

- 1995-1997 Staff Physical Therapist, Schweizer's Therapy and Rehabilitation, New Castle, DE
- 1996-1998 Clinical Instructor and Teaching Assistant, Department of Physical Therapy, University of Delaware, Newark, DE
- 1997-1998 Clinic Director and Physical Therapist, Schweizer's Therapy and Rehabilitation at Wilmington Hospital, Wilmington, DE
- 1998-2000 Research Associate and Trial Coordinator: "Clinical Research Center for Work-Related Low Back Injuries—A Randomized Trial," Department of Physical Therapy, University of Pittsburgh, Pittsburgh, PA

- 1998-2002 Adjunct Clinical Faculty, Department of Physical Therapy, University of Pittsburgh, Pittsburgh, PA
- 2000-2002 Research Associate: "A Randomized Clinical Trial of Treatments for Lumbar Spinal Stenosis," Department of Physical Therapy, University of Pittsburgh, Pittsburgh, PA
- 2001-2002 Study Coordinator: "Performance Based Measures of Unilateral Knee Osteoarthritis," Department of Physical Therapy, University of Pittsburgh, Pittsburgh, PA
- 2002-2004 Intramural Research Training Award Post-Doctoral Fellow, National Institute on Aging—National Institutes of Health, Gerontology Research Center, Clinical Research Branch, Baltimore, MD
- 2004-2006 Assistant Professor, Department of Physical Therapy and Rehabilitation Science, University of Maryland School of Medicine, Baltimore, MD
- 2004-2006 Assistant Professor, Department of Epidemiology and Preventive Medicine, University of Maryland School of Medicine, Baltimore, MD
- 2007-2012 Assistant Professor, Department of Physical Therapy, University of Delaware, Newark, DE
- 2007-Present Adjunct Faculty, Department of Epidemiology and Public Health, University of Maryland School of Medicine, Baltimore, MD
- 2012-2017 Associate Professor (with Tenure), Department of Physical Therapy, University of Delaware, Newark, DE
- 2014-2019 Chair, Department of Physical Therapy, University of Delaware, Newark, DE
- 2017-Present Professor, Department of Physical Therapy, University of Delaware, Newark, DE
- 2019-2020 Deputy Dean, College of Health Sciences, University of Delaware, Newark, DE
- 2020-Present Associate Vice President for Clinical & Translational Research, University of Delaware, Newark, DE
- 2020-Present PI & Director, Delaware Clinical and Translational Research ACCEL Program

Professional Memberships

1998-Present Member, American Physical Therapy Association

1998-Present Member, Orthopedic Section, American Physical Therapy Association

2001-Present Member, Research and Geriatric Sections, American Physical Therapy Association

2003-Present Member, Gerontological Society of America

Honors and Awards

1992	Induction into Mortar Board National Honor Society, University of Delaware
1993-1995	Presidential Fellowship Award, University of Delaware
2002-2004	Intramural Research Training Award, Post-Doctoral Fellowship, National Institute on Aging—National Institutes of Health
2004	Health Science Research Award, Gerontological Society of America. Paper: Trunk Muscle Composition as a Predictor of Physical Function in the Health ABC Study: The Moderating Role of Back Pain.
2006	First Place: Junior Faculty: Bio-Medical/Basic Science Category: University of Maryland Aging Research and Women's Health Research Poster Day: Low 25 (OH) D concentrations are associated with significant pain in older women, but not men: Findings from the InCHIANTI study
2007	Honorary Membership, Israeli Physical Therapy Society
2009	Invited Member of the Spinal Disorders and Back Pain Expert Panel for the Global Bone and Joint Decade Network Conference, Washington DC, October 2009 (APTA Representative)
2013	University of Delaware College of Health Sciences Excellence in Research Award
2016	Ellen C. Ross Memorial Lectureship, Rutgers University– School of Health Related Professions, Doctoral Program in Physical Therapy
2018	University of Delaware College of Health Sciences Inaugural Diversity Advocate Award
2018	Elected Catherine Worthingham Fellow in recognition of lasting and significant advances in science, education, and practice of the profession of Physical Therapy, American Physical Therapy Association
2019	Endowed Scully Scholar Lectureship, University of Pittsburgh—School of Health and Rehabilitation Sciences
2020	Inaugural Lynda D. Woodruff Lectureship on Diversity, Equity and Inclusion in Physical Therapy, Physical Therapy Leadership Institute
2021	Excellence in Rehabilitation of Aging Persons Award, Gerontological Society of America
2021	Elected as Fellow of the Gerontological Society of America

Administrative Service

National Service

- 2003-2004 FELCOM Laboratory Representative, Clinical Research Branch, National Institute on Aging—National Institutes of Health
 2003-Present Abstract Reviewer, Combined Sections Meeting of the American Physical Therapy Association
- 2004-2015 Abstract Reviewer, Annual Scientific Meeting for the Gerontological Society of America
- 2005-2009 Member, Orthopedic Section Research Committee, American Physical Therapy Association
- 2005-2007 Co-Convener, Epidemiology of Aging Interest Group Symposium, Gerontological Society of America
- 2005-2010 Moderator, Orthopaedic Research Platform Sessions, Combined Sections Meeting of the American Physical Therapy Association
- 2010-Present Member, Academy of Geriatric Physical Therapy Research Committee, American Physical Therapy Association
- 2019-2020 Director, Board of Directors for the American Physical Therapy Association
- 2019-2023 Member, Scientific and Practice Affairs Committee, American Physical Therapy Association
- 2020-Present Member, CAPTE Diversity, Equity and Inclusion Task Force

University Sevice

2008	Clinical Staff Search Committee, University of Delaware Physical Therapy Clinic, Newark, DE
2008-2009	College of Arts and Sciences Faculty Senate, University of Delaware, Newark, DE
2009-2012	College of Health Sciences Governance Committee, University of Delaware, Newark, DE
2009-Present	Chair, Diversity Committee, Department of Physical Therapy, University of Delaware, Newark, DE
2009	Faculty Search Committee, Department of Physical Therapy, University of Delaware, Newark, DE

2010	Search Committee for the Director of the Entry Level Doctor of Physical Therapy Program, Department of Physical Therapy, University of Delaware, Newark, DE
2010-11	Search Committee for Faculty Epidemiologist, College of Health Sciences, Department of Behavioral Health and Nutrition, University of Delaware, Newark, DE
2010-11	Search Committee for Unidel Chair of Health Sciences, College of Health Sciences, University of Delaware, Newark, DE
2010-Present	Admissions Committee, Department of Physical Therapy, University of Delaware, Newark, DE
2011-2012	Faculty Search Committee, College of Health Sciences, Department of Kinesiology and Applied Physiology, University of Delaware, Newark, DE
2011-2012	Faculty Search Committee, College of Health Sciences, Department of Physical Therapy, University of Delaware, Newark, DE
2011-2012	Search Committee for Director of Development, College of Health Sciences, University of Delaware, Newark, DE
2012-2015	College of Health Sciences Committee on Promotion and Tenure, University of Delaware, Newark, DE
2012-Present	Director, Advancing Diversity in Physical Therapy (ADaPT) Program, Department of Physical Therapy, University of Delaware, Newark, DE
2013	Search Committee for Associate Director of the Entry Level Doctor of Physical Therapy Program, College of Health Sciences, University of Delaware, Newark, DE
2013	Faculty Search Committee, College of Health Sciences, Department of Kinesiology and Applied Physiology, Athletic Training, University of Delaware, Newark, DE
2013	Search Committee for Biostatistician, College of Health Sciences, University of Delaware, Newark, DE
2013-2016	College of Health Sciences Diversity Committee, University of Delaware, Newark, DE
2014	Faculty Search Committee, Department of Physical Therapy, University of Delaware, Newark, DE
2014	Clinic Search Committee, Department of Physical Therapy, University of Delaware, Newark, DE

2015-Present UD Research Council, University of Delaware, Newark, DE

2015-Present	UD ADVANCE-NSF Internal Advisory Board, University of Delaware, Newark, DE
2015	Delaware Will Shine Strategic Planning Implementation Committee, University of Delaware, Newark, DE
2016	Chair, Search Committee for Department Chair, Department of Kinesiology and Applied Physiology, College of Health Sciences, University of Delaware, Newark, DE
2017	Appointed Member, Provost's Committee on NC State Bill #2, University of Delaware, Newark, DE
2017-Present	Board Member, UD African Heritage Caucus
2018	Working Group for the Development of a UD Graduate College
2019	Member, Search Committee for Senior Associate Dean of Nursing, School of Nursing, College of Health Sciences, University of Delaware, Newark, DE
2019-Present	Steering Committee Member, Middle States Commission on Higher Education Self-Study Steering Committee, University of Delaware
2020	Taskforce for Learning Goals & Assessment, University of Delaware
2004-Present 2005-Present 2006-Present 2006-Present 2007-Present	Archives of Physical Medicine and Rehabilitation Journal of Gerontology: Medical Sciences Geriatric Nursing
2016-2019	<u>H Membership</u> Journal of Gerontology, Medical Sciences Pain Medicine—Pain and Aging Section Physical Therapy Journal Associate Editor, Journal of Gerontology, Medical Sciences

<u>Appointments.</u> 2008	<u>Study Sections, and Data Safety Monitoring Boards</u> University of Pittsburgh Claude Pepper Older American's Independence Center Grant Reviewer
2009	NIH-NIAMS Special Emphasis Panel, April 2009
2010	Ad Hoc Reviewer, Neurological, Aging, Musculoskeletal Epidemiology NIH Study Section, February 2010
2011	Member Conflict Special Emphasis Panel, ZRG1 PSE-M (03), May 2011

Data Safety & Monitoring Board, Optimizing Care for Older Adults with Low 2011-2016 Back Pain and Depression (NIA 5R01AG033575-02, PI: JF Karp) 2011 Ad Hoc Reviewer, Musculoskeletal Rehabilitation Science NIH Study Section, 10/14/2011 Member, Scientific Review Committee for the Foundation for Physical 2012-2013 Therapy 2012 Ad Hoc Reviewer, Neurological, Aging, Musculoskeletal Epidemiology NIH Study Section, 10/11/2012 2013 Ad Hoc Reviewer, Musculoskeletal Rehabilitation Science NIH Study Section, 6/2013 2013 Mail Reviewer, Musculoskeletal Rehabilitation Science NIH Study Section and Aging and Geriatric Systems Study Section, Fall 2013 2013-2019 Data Safety & Monitoring Board, Fibromyalgia Activity Study with TENS (NIAMS UM1 AR063381, PI: K Sluka) 2013-Present Executive Committee, Comprehensive Opportunities in Rehabilitation Research Training (CORRT) Multicenter Career Development Program for Physical and Occupational Therapy 2014 Chair, Scientific Review Committee, Foundation for Physical Therapy 2015 Ad Hoc Reviewer, Musculoskeletal Rehabilitation Science NIH Study Section, 6/2015 Advisory Committee Member, National Advisory Board on Medical 2015-2019 Rehabilitation Research, NIH 2016-2017 Invited Member, Federal Pain Research Strategy Working Group on Prevention of Acute and Chronic Pain, NIH and Interagency Pain Research **Coordinating Committee** 2016-Present External Advisory Board, University of Pittsburgh Epidemiology of Aging Training Grant (T32 AG000181) 2017-2018 Chair, National Advisory Board on Medical Rehabilitation Research, NIH 2018 Ad Hoc Reviewer, Neurological, Aging, Musculoskeletal Epidemiology NIH Study Section, 06/2018 2019-Present Chartered Member, Neurological, Aging, Musculoskeletal Epidemiology NIH Study Section, Center for Scientific Review

Co-Chair for the Emotion Behavior Neuropsychology Subgroup, NINDS/NICHD Common Data Elements (CDEs) Working Group for the Rehabilitation CDE Project

<u>Students and Trainees</u> <u>Advisor</u> (Complete) J. Megan Sions (Complete) Victoria Allen (Complete) Peter Coyle (Current) Patrick Knox	 PhD Biomechanics & Movement Sciences, University of Delaware PhD Applied Physiology, University of Delaware PhD Biomechanics & Movement Sciences, University of Delaware PhD Biomechanics & Movement Sciences, University of Delaware
<u>Committee</u> (Current) Allison Miller	PhD Biomechanics & Movement Sciences, University of Delaware Advisor: Darcy Reisman
(Complete) Emma Beisheim	PhD Biomechanics & Movement Sciences, University of Delaware Advisor: J. Megan Sions
(Complete) Jessica Galgiani	PhD Biomechanics & Movement Sciences, University of Delaware Advisor: Susanne Morton
(Complete) Dana Matthews	PhD Biomechanics & Movement Sciences, University of Delaware Advisor: Daniel White
(Complete) Hiral Master	PhD Biomechanics & Movement Sciences, University of Delaware Advisor: Daniel White
(Complete) Marissa Scibilia	PhD Nursing Science, University of Delaware Advisor: Ingrid Pretzer-Aboff
(Complete) Catherine Schmidt	PhD Rehabilitation Sciences, MGH Institute of Health Professions Advisor: Jonathan Bean
(Complete) Won Sung	PhD Rehabilitation Sciences, Drexel University Advisor: Sheri Silfies
(Complete) Portia Flowers	PhD Biomechanics & Movement Sciences, University of Delaware Advisor: Joseph Zeni and Lynn Snyder-Mackler
(Complete) Sumayeh Abujaber	PhD Biomechanics & Movement Sciences, University of Delaware Advisor: Joseph Zeni and Lynn Snyder-Mackler
(Complete) Scott Biely	PhD Rehabilitation Sciences, Drexel University Advisor: Sheri Silfies
(Complete) Valerie Sabol	PhD Nursing, University of Maryland, Baltimore Advisior: Barbara Resnick
(Complete) Chris D'Adamo	PhD Epidemiology, University of Maryland, Baltimore Advisors: Michelle Shardell and Ram Miller
(Complete) Stephanie DiStasi	PhD Biomechanics & Movement Sciences, University of Delaware Advisor: Lynn Snyder-Mackler
(Complete) David Logerstedt	PhD Biomechanics & Movement Sciences, University of Delaware Advisor: Lynn Snyder-Mackler
(Complete) Margie Roos	PhD Biomechanics & Movement Sciences, University of Delaware Advisor: Katherine Rudolph
(Complete) Andrew Lynch	PhD Biomechanics & Movement Sciences, University of Delaware Advisor: Lynn Snyder-Mackler
(Complete) Peemongkon Wattanano	n PhD Rehabilitation Sciences, Drexel University Advisor: Sheri Silfies

Mentor	
J. Megan Sions	Post-Doctoral Fellow
Joseph Zeni	NIH K-12 Scholar
Daniel White	NIH K-12 Scholar
Corey Simon	Duke Pepper Center Scholar

2020

Grant Support Ongoing Research		
R01AG041202 (Hicks) NIH/NIA	9/1/2018 - 5/31/2022 Direct—\$4,303,347	3.78 academic
Chronic Low Back Pain in Older Adu The long-term goal of this line of rese rehabilitation approach for older adul optimize mobility function by address the initial funding period of this grant Role: PI	earch is to develop and test a Its with chronic LBP that is spe sing pain and the unique impai	standardized ecifically designed to
U54GM104941C (Hicks) NIH/NIGMS <i>Delaware Clinical and Translational I</i> The overall goal of the ACCEL Progr growth in strategic areas to improve Role: PI	Direct—\$11,999,990 Research ACCEL Program - A ram remains to provide the key	y components to allow
5K12HD055931-14 (Mueller) UW/NIH <i>Multicenter Career Development Pro</i> Comprehensive Opportunities in Ref Career Development Program for Ph for new investigators to acquire the r investigators in rehabilitation approact Role: Site PI	nabilitation Research Training hysical and Occupational Thera esearch skills necessary to be	(CORRT) is a Multicenter apists. It provides funding
T32HD007490E (Snyder-Mackler) NIH <i>NIH RENEWAL PT/PHD PREDOCT</i> The goal of this pre-doctoral training quantity of individuals who will contri practice in physical rehabilitation. Role: Co-Investigator	program is to continue to impl	rove the quality and
R01NR018684-01 (Tulsky) NIH <i>Measuring Symptom Clusters in Peo</i> The work proposed with this adminis generalizability of the symptom clust impairment (MCI)/Alzheimer's diseas develop resources and collect pilot d	trative supplement is needed termination for the supplement is needed to the supplement of the supplement of the supplementation and the superscent and the supplementation and the superscent and the	to evaluate the im 1 to a mild cognitive y, this will allow us to

symptom clusters in MCI and AD. Role: Co-Investigator

<u>Pending</u> None

CompletedR03 HD088668 (J.M. Sions)04/01/2017-03/31/20190.60 calendar(5%)NICHD\$100,000 - Direct\$156,000 - Total CostTrunk Muscle Characteristics and their Association with Balance, Function, andParticipation among Individuals with AmputationsThis study will allow us to determine whether trunk muscle impairments and asymmetriesare associated with the presence of a unilateral lower limb amputation (LLA), as well asbalance, physical function, and societal participation among individuals with LLAs.Role on Project:Co-Investigator

1R01AG048069-01 (J. Guralnik)9/30/15—4/30/191.2 calendar(10%)NIA\$974,160 – Direct\$1,427,012 - Total CostStatistical Methods for Vitamin D Targets for Functional Outcomes in Older AdultsThe purpose of this project is to identify and validate 25-hydroxyvitamin D targets for fallsreduction, mobility, activities of daily living, and instrumental activities of daily living(functional outcomes); and gait speed, muscle strength, and frailty (proximal conditions)using 4 prospective cohort studies comprising >12,500 older adults: Health, Aging, andBody Composition, Invecchiare in Chianti, Osteoporotic Fractures in Men, and Study ofOsteoporotic Fractures.

Role on Project: Co-Investigator

1R01AG041202 (G. Hicks)8/01/12—6/31/183.6 calendar(30%)NIA\$1,600,065 - Direct\$2,338,160 - Total CostChronic Low Back Pain in Older Adults: The Role of Co-Existing Hip ImpairmentsThe purpose of this project is to examine the impact of co-existing clinical hip impairmentson spinal pain and functional limitations in older adults with chronic low back pain using alongitudinal cohort design.

Role on Project: Principal Investigator

4R37 AG009901-05 (J. Magaziner) 8/1/11 - 6/30/16 0.60 calendar (5%) NIA \$4,781,737 - Direct \$7,205,844 - Total Cost Effects of Multi-Modal Exercise Intervention Post Hip Fracture

The primary goals proposed for this study are: (1) to study some of the key mechanisms on the pathway to changes in community ambulation in response to a Multi-modal Exercise Intervention (MMEI); and (2) test, in a preliminary manner through a pilot/feasibility study of a different sample of patients, the additional benefit of adding a protein supplement following MMEI sessions to determine if there are important changes in bone, muscle, inflammation, and function.

Role on Project: Co-Investigator

2R01 AR048212-06 (L. Snyder-Mackler) 12/01/10—11/30/15 0.60 calendar (5%) NIAMS

Can Neuromuscular Training Alter Movement Patterns?

The goal of this application is to continue to examine outcomes of specialized neuromuscular and muscle strength training that may prevent post-traumatic osteoarthritis

(OA), to obtain preliminary information about who has the potential to develop early signs of OA, and develop strategies to prevent structural changes in the joints of these individuals. Role on Project: Co-Investigator

No number (G. Hicks) 2012-2013 Academic Year University of Delaware, President's Diversity Initiative Award. \$40,000 Development of the ADaPT Program (Advancing Diversity in Physical Therapy). A jointly sponsored program between the Departments of Physical Therapy and Kinesiology & Applied Physiology to develop a mentoring program, undergraduate research program and a new bridge course in anatomy as a means of attracting a more diverse group of students into the College of Health Sciences and the nationally ranked doctoral program in PT. Role on Project: Principal Investigator

No number (G. Hicks) 11/08—12/12

University of Delaware,

NIA

Cross College Cluster in Aging Initiative Research on Aging Grant. \$20,000 Funding to supplement ongoing project "Mechanisms of Disability in Older Adults with Chronic Low Back Pain."

Role on Project: Principal Investigator

No number (G. Hicks) 12/01/10—09/30/12 University of Delaware Research Foundation, Inc. \$45,000 The Effectiveness of Hip-Focused Treatment for Older Adults with Chronic Low Back Pain The purpose of this project is to examine the effectiveness of typical spine-focused physical therapy augmented by manual therapy and exercise focused on the hip, to reduce pain and improve functional capacity of older adults with chronic low back pain. This work will serve to collect pilot data for future randomized trials on this topic Role: Principal Investigator

1 R21 HD057274-01 (G. Hicks) 07/01/08—1/31/12 1.8 calendar (15%) NICHD \$420,750 Trunk Muscle Training + NMES: Improving Function in Elders with Chronic Back Pain The purpose of this project is to examine the effectiveness of trunk muscle training, both volitionally and augmented by neuromuscular electrical stimulation, to reduce pain and improve functional capacity of older adults with chronic low back pain. This study also proposes to examine changes in trunk muscle composition with this intervention via MRI. Role on Project: Principal Investigator

R01 AG029315 (J. Magaziner/M. Hochberg) 03/01/07—02/29/12 0.60 calendar (5%)

\$531,495

The Epidemiology of Bone Strength and Muscle Composition After Hip Fracture in Men This ancillary study is designed to extend the investigation of the hip fracture consequences further by examining trajectories of change in bone strength, bone metabolism, muscle composition, hormones, and markers of inflammation following hip fracture, and by comparing these changes in men and women during the year following a hip fracture. Role: Co-Investigator and Rehabilitation Scientist

P20 RR16458 (T. Buchanan) 01/05/09—5/31/10 NCRR \$50,000 Functional Recovery after Lumbar Spinal Stenosis Surgery: A Preliminary Study The pilot project is funded by the Center of Biomedical Research Excellence at the University of Delaware The purpose of the project is to examine the role of muscle impairments in the recovery of function after surgery for lumbar spinal stenosis. Role on Project: Principal Investigator

R37 AG009901 (J. Magaziner/M. Hochberg)

NIA

03/15/05—02/28/10 0.60 calendar (5%)

\$679,691

Sequelae of Hip Fracture in Men: An Epidemiologic Study

The primary aims of the proposed study are: 1) to describe the trajectories of components of bone strength, including bone mineral density, ultrasound properties, and bone geometry in men with hip fractures during the year after fracture and contrast this with these components in women with hip fractures; 2) to describe the trajectories of other aspects of non-bone components of body composition, including muscle and fat mass in men during the year after hip fracture and to contrast these with observations in women; 3) to describe the trajectories of physical activity, neuromuscular function, and functional performance in men and to compare these to trajectories observed in women during the year after fracture. Role: Co-Investigator and Rehabilitation Scientist

1K12HD055931-01 (M. Mueller) 01/01/08—12/31/09 9.0 calendar (75%) NICHD

Multicenter Career Development Program for Physical and Occupational Therapy (Comprehensive Opportunities in Rehabilitation Research Training-CORRT)

The overall goal of this proposal is to establish a Multicenter Physical Therapy and Occupational Therapy Career Development Program (PT/OT CDP) designed to provide new investigators with the skills needed to lead research programs that validate rehabilitation approaches, optimize treatments, and incorporate new technologies to maximize the potential of all people.

Role: Faculty Scholar

No number (G. Hicks)06/01/07—05/31/081.0 calendarUniversity of Delaware Research Foundation, Inc.\$25,000Trunk Muscle Training to Improve Function in Older Adults with Chronic Low Back Pain: APilot Trial

The purpose of this project is to examine the effectiveness of trunk muscle training augmented by neuromuscular electrical stimulation, to reduce pain and improve functional capacity of older adults with chronic low back pain. This work will serve to collect pilot data for future randomized trials on this topic

Role: Principal Investigator

K12 HD42489 (P. Langenberg) 07/01/05—01/31/07 9.0 calendar 75% NICHD

Maryland's Organized Research Effort in Women's Health (MORE-WH)

(Building Interdisciplinary Research Careers in Women's Health) This program is designed to foster interdisciplinary research in women's health among junior faculty scholars working together with senior faculty mentors to bridge the gap between specialized training and independent research careers.

Role: Faculty Scholar

No number (G. Hicks)07/01/05—06/30/06UMB School of Medicine\$15,000Antioxidants and Functional Performance in Hip Fracture Patients

The purpose of this project is to measure serum levels of antioxidants in stored serum samples collected from patients in one of the Baltimore Hip Studies cohorts at the baseline clinic visit to evaluate their predictive value for functional capacity in older persons at six and twelve months post-hip fracture. Role: PI

Publications

Refereed Journals:

- 1. Fritz JM, Wainner RS, <u>Hicks GE</u>. The Use of Non-Organic Signs and Symptoms as a Screening Tool for the Development of Chronicity in Patients with Acute Low Back Pain. *Spine* 25(15):1925-31, 2000
- George SZ, <u>Hicks GE</u>, Vogt MT, Nevitt MA, Cauley JA. The Relationship Between Lumbar Lordosis and Radiological Variables and Lumbar Lordosis and Clinical Variables in Older, African-American Women. *Journal of Spinal Disorders and Techniques* 16(2):200-6, Apr 2003
- 3. Childs JD, Piva SR, Erhard RE, <u>Hicks G</u>. Side-to-side weight-bearing asymmetry in patients with low back pain. *Manual Therapy* 8(3):166-9, Aug 2003.
- 4. Piva SR, Erhard RE, Childs JD, <u>Hicks G</u>. Reliability of measuring iliac crest height in standing and in sitting positions using a new measurement device. *Journal of Manipulative and Physiologic Therapeutics* 26(7):437-41, Sept 2003
- <u>Hicks GE</u>, Fritz JM, Delitto A, Mishock J. Interrater Reliability of Clinical Examination Measures for Identification of Lumbar Segmental Instability. *Archives of Physical Medicine and Rehabilitation* 84:1858-64, Dec 2003
- <u>Hicks GE</u>, Simonsick EM, Harris TB, Newman AB, Weiner D, Nevitt M, Tylavsky F. Cross-sectional Associations Between Trunk Muscle Composition, Back Pain and Physical Function in the Health ABC Study. *J Gerontol A Biol Sci Med Sci*. 2005 Jun; 60(7):882-7
- <u>Hicks GE</u>, Fritz JM, Delitto A, McGill SM. Preliminary Development of a Clinical Prediction Rule for Determining Which Patients with Low Back Pain will Respond to a Stabilization Exercise Program. *Archives of Physical Medicine and Rehabilitation*. 2005 Sep; 86(9):1753-62.
- <u>Hicks GE</u>, Simonsick EM, Harris TB, Newman AB, Weiner D, Nevitt M, Tylavsky F. Trunk Muscle Composition as a Predictor of Physical Function in the Health ABC Study: The Moderating Role of Back Pain. *J Gerontol A Biol Sci Med Sci.*. 60(11):1420-4, November 2005
- Ericksen JJ, Bean JF, Kiely D, <u>Hicks GE</u>, Leveille SG. Does gynecological surgery contribute to low back problems in later life? An analysis of the Women's Health and Aging Study. *Archives of Physical Medicine and Rehabilitation*. 2006 Feb;87(2):172-6.
- 10. Cecchi F, Debolini P, Lova RF, Macchi C, Bandinelli S, Bartali B, Lauretani F, Benvenuti E, <u>Hicks G</u>, Ferrucci L. Epidemiology of Back Pain in a Representative

Cohort of Italian Persons Aged 65 and Older: The InCHIANTI Study. *Spine*. 2006 May 1;31(10):1149-55.

- 11. <u>Hicks GE</u>, George SZ, Vogt MT, Nevitt MA, Cauley JA. Measurement of Lumbar Lordosis: Inter-Rater Reliability, Minimum Detectable Change and Longitudinal Variation. *Journal of Spinal Disorders and Techniques*. 2006 Oct;19(7):501-6.
- Miller RR, <u>Hicks GE</u>, Shardell MD, Cappola AR, Hawkes WG, Yu-Yahiro JA, Keegan A, Magaziner J. Association of Serum Vitamin D Levels with Inflammatory Response Following Hip Fracture * The Baltimore Hip Studies. *J Gerontol A Biol Sci Med Sci*. 2007 62: 1402-1406.
- <u>Hicks GE</u>, Shardell MD, Miller RR, Bandinelli S, Guralnik JM, Cherubini A, Lauretani F, Ferrucci L. Associations between vitamin D status and pain in older adults: The InCHIANTI study. *Journal of the American Geriatrics Society*. 2008 Mar 5; [Epub ahead of print]
- 14. Miller RR, Shardell MD, <u>Hicks GE</u>, Cappola AR, Hawkes WG, Yu-Yahiro JA, Magaziner J. Association of Interleukin-6 with Lower Extremity Function Following Hip Fracture: The Role of Muscle Mass and Strength. *Journal of the American Geriatrics Society*. 2008 Jun;56(6):1050-6. Epub 2008 Apr 11.
- Hicks GE, Gaines JM, Shardell MD, Simonsick EM. Associations of back and leg pain with health status and functional capacity of older adults: Findings from the Retirement Community Back Pain Study. *Arthritis Rheum.* 2008 Aug 29;59(9):1306-1313. [Epub ahead of print]
- 16. Shardell M, <u>Hicks GE</u>, Miller RR, Kritchevsky S, Andersen D, Bandinelli S, Cherubini A, Ferrucci L. Association of low vitamin D levels with the frailty syndrome in men and women. *J Gerontol A Biol Sci Med Sci*. 2009 Jan 20. [Epub ahead of print]
- 17. <u>Hicks GE</u> and Manal TJ. Psychometric properties of commonly used low back disability questionnaires: Are they useful for older adults with low back pain? *Pain Med* 2009 Jan;10(1):85-94.
- Yu-Yahiro J, Resnick B, Orwig D, <u>Hicks G</u>, Magaziner J. Design and Implementation of a Home-Based Exercise Program Post-Hip Fracture: The Baltimore Hip Studies Experience. *PM&R* 2009 April; 1(4):308-18.
- <u>Hicks GE</u>, Morone N, Weiner DK. Degenerative lumbar disc and facet disease in older adults: prevalence and clinical correlates. *Spine*. 2009 May 20;34(12):1301-1306.
- 20. Miller RR , Ballew S, Shardell M, <u>Hicks GE</u>, Resnick B, Hawkes W, Magaziner J. Repeat Falls and the Recovery of Social Participation in the Year Post Hip Fracture. *Age and Ageing*. 2009 Jul 8. [Epub ahead of print]
- Sabol V, Resnick B, Galik E, Gruber-Baldini A, Morton PG, <u>Hicks GE</u>. Anemia and Impact on Function in Nursing Home Residents: What Do We Know? *J Am Acad Nurse Pract*. 2010 Jan;22(1):3-16. PMID: 20074191

- 22. Resnick B, <u>Hicks GE</u>, Orwig D, Yu-Yahiro J, Magaziner J. Review of the Impact of Exercise Interventions on Function Post Hip Fracture and Recommendations for Future Interventions. *International Journal of Disability, Community and Rehabilitation.* 2010; 9(1).
- Shardell M, <u>Hicks GE</u>, Miller RR, Langenberg P, Magaziner J. Pattern-mixture models for analyzing normal outcome data with proxy respondents. *Statistics in Medicine*. 2010 June 30; 29(14):1522-38. PMID: 20535763
- Shardell M, <u>Hicks GE</u>, Miller RR, Magaziner J. Semiparametric regression models for repeated measures of mortal cohorts with non-monotone missing outcomes and time-dependent covariates. *Statistics in Medicine*. 2010 Jun 18. [Epub ahead of print] PMID: 20564729
- Sabol V, Resnick B, Galik E, Gruber-Baldini A, Morton PG, <u>Hicks GE</u>. Anemia Evaluation and Management in Nursing Home Residents. West J Nurs Res. 2010 Jun;32(4):447-61. PMID: 20685904
- 26. Sabol V, Resnick B, Galik E, Gruber-Baldini A, Morton PG, <u>Hicks GE</u>. Exploring the Factors that Influence Functional Performance Among Nursing Home Residents. J Aging Health. 2011 Feb;23(1):112-34. Epub 2010 Oct 4. PMID: 20921327
- Kesar T, Binder-Macleod SA, <u>Hicks GE</u>, Reisman DS. Minimum detectable change for gait variables collected during treadmill walking in individuals post-stroke. *Gait Posture*. 2011 Feb; 33(2):314-7. Epub 2010 Dec 22. PMID: 21183350
- Sions JM, <u>Hicks GE</u>. Fear avoidance beliefs are associated with disability in older American adults with low back pain. *Phys Ther.* 2011 Apr;91(4):525-34. Epub 2011 Feb 24. PMID:21350033
- Shardell M, Alley D, <u>Hicks GE</u>, El-Kamary SS, Miller RR, Semba RD, Ferrucci L. Low-serum carotenoid concentrations and carotenoid interactions predict mortality in US adults: the Third National Health and Nutrition Examination Survey. *Nutrition Research* 2011 Mar;31(3):178-89. PMID: 21481711
- 30. D'Adamo CR, Shardell MD, <u>Hicks GE</u>, Orwig DL, Hochberg MC, Semba RD, Yu-Yahiro, JA, Ferrucci L, Magaziner J, Miller RR. Serum vitamin E concentrations among highly-functioning hip fracture patients are higher than in non-fracture controls. *Nutrition Research* 2011 Mar;31(3):205-14. PMID: 21481714
- 31. D'Adamo CR, Miller RR, <u>Hicks GE</u>, Orwig DL, Hochberg MC, Semba RD, Yu-Yahiro, JA, Ferrucci L, Magaziner J, Shardell MD. Serum vitamin E concentrations and recovery of physical function during the year after hip fracture. *J Gerontol A Biol Sci Med Sci.* 2011 Jul;66(7):784-93. PMID: 21486921
- 32. <u>Hicks GE</u>. Invited Commentary on "Low inter-rater reliability of examiners performing the prone instability test, a clinical test for lumbar shear instability." *Arch Phys Med Rehabil.* 2011 Jun; 92(6):920-2. PMID: 21621669.
- 33. Alley DE, <u>Hicks GE</u> (Alternate Corresponding Author), Shardell MD, Hawkes W, Miller RR, Craik RL, Mangione KK, Orwig DL, Hochberg MC, Resnick B, Magaziner

J. Meaningful improvement in gait speed in hip fracture recovery. *J Amer Geriatr Soc*. 2011 Sep;59(9):1650-7. PMID: 21883109

- <u>Hicks GE</u>, Shardell MD, Alley DE, Miller RR, Bandinelli S, Guralnik JM, Lauretani F, Simonsick EM, Ferrucci L. Absolute strength and loss of strength as predictors of mobility decline in older adults: The InCHIANTI study. *J Gerontol A Biol Sci Med Sci.* 2012 Jan;67(1):66-73.. PMID: 21546582
- 35. <u>Hicks GE</u>, Benvenuti B, Fiaschi V, Lombardi B, Segenni L, Stuart M, Pretzer-Aboff I, Gianfranco G, Macchi C. Adherence to a community-based exercise program is a strong predictor of improved back pain status in older adults: An observational study. *Clin J Pain*. 2012 Mar-Apr;28(3):195-203. PMID:21750458
- 36. Katzman W, Cawthon P, <u>Hicks GE</u>, Vittinghoff E, Shepherd J, Cauley JA, Harris TB, Simonsick EM, Strotmeyer E, Womak C, Kado DM. The relationship between spinal muscle composition and prevalence of hyperkyphosis in healthy community-dwelling older men and women. *J Gerontol A Biol Sci Med Sci.* 2012 Feb;67(2):191-5. PMID: 21878482
- Shardell M, Alley DE, Miller RR, <u>Hicks GE</u>, Magaziner J. Comparing reports from hip-fracture patients and their proxies: implications on evaluating sex differences in disability and depressive symptoms. *J Aging Health*. 2012 Apr;24(3):367-83. PMID: 22210805
- Shardell M, D'Adamo C, Alley DE, Miller RR, <u>Hicks GE</u>, Milaneschi Y, Semba RD, Cherubini A, Bandinelli S, Ferrucci L. Serum 25-Hydroxyvitamin D, Transitions between Frailty States, and Mortality among Older Adults: The Invecchiare in Chianti Study. *J Amer Geriatr Soc.* 2012 Feb;60(2):256-64. PMID:22283177
- 39. D'Adamo CR, Miller RR, Shardell MD, Orwig DL, Hochberg MC, Ferrucci L, Semba RD, Yu-Yahiro JA, Magaziner J, <u>Hicks GE</u>. Higher serum concentrations of dietary antioxidants are associated with lower levels of inflammatory biomarkers during the year after hip fracture. *Clin Nutr.* 2012 Oct;31(5):659-65. PMID: 22365613
- Shardell M, Simonsick EM, <u>Hicks GE</u>, Resnick B, Ferrucci L, Magaziner J. Sensitivity Analysis for Nonignorable Missingness and Outcome Misclassification from Proxy Reports in Aging Research. *Epidemiology*. 2013 Mar;24(2):215-23. PMID:23348065
- 41. Lynch AD, Logerstedt DS, Grindem H, Eitzen I, <u>Hicks GE</u>, Axe MJ, Enerbretsen L, Risberg MA, Snyder-Mackler L. Consensus criteria for defining 'successful outcome' after ACL injury and reconstruction: A Delaware-Oslo ACL cohort investigation. *Br J Sports Med*. 2013 Jul 23. doi: 10.1136/bjsports-2013-092299. [Epub ahead of print] PMID: 23881894
- 42. Biely SA, Silfies SA, Smith SS, <u>Hicks GE</u>. Clinical Observation of Standing Trunk Movements: What do the Aberrant Movement Patterns Tell Us? *J Orthop Sports Phys Ther*. 2014 Jan 22. [Epub ahead of print] PMID: 24450372
- 43. Sions JM, Velasco TO, Teyhen DS, <u>Hicks GE</u>. Ultrasound Imaging: Intra- and Inter-Examiner Reliability for Multifidus Muscle Thickness Assessment in Adults Aged 60-

85 Years versus Younger Adults. *J Orthop Sports Phys Ther*. 2014 Jun;44(6):425-34. doi: 10.2519/jospt.2014.4584. Epub 2014 Apr 25. PMID: 24766356

- Sions JM, Velasco TO, Teyhen DS, <u>Hicks GE</u>. Reliability of Ultrasound Imaging for the Assessment of Lumbar Multifidi Thickness in Older Adults with Chronic Low Back Pain. *J Geriatr Phys Ther.* 2015 Jan-Mar;38(1):33-9. doi: 10.1519/JPT.00000000000021. PMID: 24743751
- 45. Shardell M, <u>Hicks GE</u>. Statistical analysis with missing exposure data measured by proxy respondents: a misclassification problem within a missing-data problem. In press: *Statistics in Medicine*. 2014 Jun 17. [Epub ahead of print] PMID: 24935824
- Shardell M, <u>Hicks GE</u>, Ferrucci L. Doubly robust estimation and causal inference in longitudinal studies with dropout and truncation by death. Biostatistics. 2015 Jan;16(1):155-68. doi: 10.1093/biostatistics/kxu032. Epub 2014 Jul 4.PMID: 24997309
- Shardell M, Semba RD, Kalyani RR, <u>Hicks GE</u>, Bandinelli S, Ferrucci L. Serum 25-Hydroxyvitamin D, Plasma Klotho, and Lower-Extremity Physical Performance Among Older Adults: Findings From the InCHIANTI Study. J Gerontol A Biol Sci Med Sci. 2015 Sep;70(9):1156-62. doi: 10.1093/gerona/glv017. Epub 2015 Mar 7. PMID: 25748032
- Miller RR, Eastlack M, <u>Hicks GE</u>, Alley DE, Shardell M, Orwig D, Goodpaster B, Chomentowski P, Hawkes W, Hochberg M, Ferrucci L, Magaziner J. Asymmetry in CT scan measures of thigh muscle 2 months after hip fracture: The Baltimore Hip Studies. J Gerontol A Biol Sci Med Sci. 2015 Jun; 70(6):753-6. doi: 10.1093/gerona/glr188. PMID: 25958401
- Dar G, <u>Hicks GE</u>. The immediate effect of dry needling on multifidus muscles' function in healthy individuals. J Back Musculoskelet Rehabil. 2015 Sep 6. [Epub ahead of print] PMID: 26406203
- Resnick B, Gruber-Baldini AL, <u>Hicks G</u>, Ostir G, Klinedinst NJ, Orwig D, Magaziner J. Measurement of Function Post Hip Fracture: Testing a Comprehensive Measurement Model of Physical Function. Rehabil Nurs. 2015 Oct 23. doi: 10.1002/rnj.235. [Epub ahead of print] PMID: 26492866
- Coyle PC, Sions JM, Velasco TO, <u>Hicks GE</u>. Older adults with chronic low back pain: A clinical population vulnerable to frailty? J Frailty Aging. 2015; 4(4):188-90. doi: 10.14283/jfa.2015.75. PMID: 27031017
- 52. Sions JM, Teyhen DS, <u>Hicks GE</u>. Criterion Validity of Ultrasound Imaging: Assessment of Multifidi Cross-Sectional Area in Older Adults with and without Low Back Pain. J Geriatr Phy Ther. 2015 Dec 23. [Epub ahead of print] PMID: 26703525
- <u>Hicks GE</u>, Sions JM, Velasco TO, Manal TJ. Trunk Muscle Training Augmented with Neuromuscular Electrical Stimulation Appears to Improve Function in Older Adults with Chronic Low Back Pain: A Randomized Preliminary Trial. Clin J Pain. 2016 Jan 5. [Epub ahead of print] PMID: 26736024

- 54. Sions JM, Smith AC, <u>Hicks GE</u>, Elliott, JM. Trunk Muscle Size and Composition Assessment in Older Adults with Chronic Low Back Pain: An Intra-examiner and Inter-examiner Reliability Study. Pain Med. 2015 Dec 7. pii: pnv023. [Epub ahead of print] PMID: 26814258
- 55. Rathbun AM, Shardell M, Orwig D, Hebel JR, <u>Hicks GE</u>, Beck T, Hochberg MC, Magaziner J. Differences in the Trajectory of Bone Mineral Density Change Measured at the Total Hip and Femoral Neck Between Men and Women Following Hip Fracture. Arch Osteoporos. 2016; 11:9. doi: 10.1007/s11657-016-0263-6. Epub 2016 Feb 4. PMID: 26847627
- Resnick B, Klinedinst NJ, Yerges-Armstrong L, Magaziner J, Orwig D, Hochberg MC, Gruber-Baldini AL, <u>Hicks GE</u>, Dorsey SG. Pain, Genes and Function in the Post-Hip Fracture Period. Pain Manag Nurs. 2016 Jun;17(3):181-96. doi: 10.1016/j.pmn.2016.03.003. PMID: 27283266
- 57. Sions JM, <u>Hicks GE</u>. Back Stiffness is Associated with Physical Health and Low Back Pain-Related Disability in Community-Dwelling Older Adults. Pain Med. 2016 Jun 10. pii: pnw107. [Epub ahead of print] PMID:27288949
- 58. Roos MA, Reisman DS, <u>Hicks G</u>, Rose WC, Rudolph KS. Development of the modified Four Square Step Test and its reliability and validity in people with stroke. J Rehabil Res Dev. 2016;53(3):403-12. doi: 10.1682/JRRD.2014.04.0112. PMID: 27271003
- Coyle PC, Sions JM, Velasco TO, <u>Hicks GE</u>. Lumbar mobility and performancebased function: an investigation in older adults with and without chronic low back pain. Pain Med. 2016 Jun 26. pii: pnw136. [Epub ahead of print] PMID: 27346888
- Gill SV, <u>Hicks GE</u>, Zhang Y, Niu J, Apovian CM, White DK. The association of waist circumference with walking difficulty among adults with or at risk of knee osteoarthritis: the Osteoarthritis Initiative. *Osteoarthritis Cartilage*. 2016 Aug 1. pii: S1063-4584(16)30197-2. doi: 10.1016/j.joca.2016.07.011. [Epub ahead of print] PMID: 27492464
- 61. Rathbun AM, Shardell M, Orwig D, Hebel JR, <u>Hicks GE</u>, Beck TJ, Magaziner J, Hochberg MC. Difference in the trajectory of change in bone geometry as measured by hip structural analysis in the narrow neck, intertrochanteric region, and femoral shaft between men and women following hip fracture. *Bone*. 2016 Aug 26;92:124-131. doi: 10.1016/j.bone.2016.08.020. [Epub ahead of print] PMID:27569519
- Sions JM, Coyle PC, Velasco TO, Elliott JM, <u>Hicks GE</u>. Multifidi Muscle Characteristics and Physical Function among Older Adults with and without Chronic Low Back Pain. *Arch Phys Med Rehabil*. 2016 Aug 30. pii: S0003-9993(16)30903-0. doi: 10.1016/j.apmr.2016.07.027. [Epub ahead of print] PMID: 27590444
- 63. Rathbun AM, Shardell M, Orwig D, Gruber-Baldini AL, Ostir G, <u>Hicks GE</u>, Miller RR, Hochberg MC, Magaziner J. Effects of prefracture depressive illness and postfracture depressive symptoms on physical performance after hip fracture *J Am*

Geriatr Soc. 2016 Sept 27. doi: 10.1111/jgs.14487. [Epub ahead of print] PMID:27673273

- Sions JM, Elliott JM, Pohlig RT, <u>Hicks GE</u>. Trunk Muscle Characteristics of the Multifidi, Erector Spinae, Psoas and Quadratul Lumborum in Older Adults with and without Chronic Low Back Pain. *J Orthop Sports Phys Ther*. 2017 Mar;47(3):173-179. doi: 10.2519/jospt.2017.7002. Epub 2017 Feb 3. PMID: 28158957
- <u>Hicks GE</u>, Sions JM, Coyle PC, Pohlig RT. Altered Spatiotemporal Characteristics of Gait in Older Adults with and without Chronic Low Back Pain. *Gait Posture*. 2017 Apr 23;55:172-176. doi: 10.1016/j.gaitpost.2017.04.027. [Epub ahead of print] PMID: 28458149
- Coyle PC, Schrack JA, <u>Hicks GE</u>. Pain Energy Model of Mobility Limitation in the Older Adult. *Pain Med*. 2018 Aug 1;19(8):1559-1569. doi: 10.1093/pm/pnx089. PubMed PMID: 28531299; PubMed Central PMCID: PMC6084583.
- 67. Megan Sions J, Angelica Rodriguez C, Todd Pohlig R, <u>Evan Hicks G (names were published incorrectly on PubMed</u>), Charles Coyle P. Epidural Fat and Its Association with Pain, Physical Function, and Disability Among Older Adults with Low Back Pain and Controls. Pain Med. 2017 Sep 14. doi: 10.1093/pm/pnx163. [Epub ahead of print] PMID: 29024961
- Rathbun AM, Magaziner J, Shardell MD, Yerges-Armstrong LM, Orwig D, <u>Hicks GE</u>, Hochberg MC. Older men who sustain a hip fracture experience greater declines in bone mineral density at the contralateral hip than non-fractured comparators. *Osteoporos Int.* 2017 Oct 24. doi: 10.1007/s00198-017-4280-0. [Epub ahead of print] PMID: 29063216
- Hicks GE, Sions JM, Velasco TO. Hip Symptoms, Physical Performance and Health Status in Older Adults with Chronic Low Back Pain: A Preliminary Investigation. Arch Phys Med Rehabil. 2018 Jul;99(7):1273-1278. 2017 Oct 27. pii: S0003-9993(17)31288-1. doi: 10.1016/ j.apmr.2017.10.006. [Epub ahead of print] PMID: 29111171
- Wattananon P, Ebaugh D, Biely SA, Smith SS, <u>Hicks GE</u>, Silfies SP. Kinematic Characterization of Clinically Observed Aberrant Movement Patterns in Patients with Non-specific Low Back Pain: A Cross-sectional Study. BMC Musculoskelet Disord. 2017 Nov 15;18(1):455. doi: 10.1186/s12891-017-1820-x.PMID: 29141615
- 71. Simonsick EM, Aronson B, Schrack JA, <u>Hicks GE</u>, Jerome GJ, Patel KV, Studenski SA, Ferrucci L. Lumbopelvic Pain and Threats to Walking Ability in Well-Functioning Older Adults: Findings from the Baltimore Longitudinal Study of Aging. J Am Geriatr Soc. 2018 Feb 7. doi: 10.1111/jgs.15280. [Epub ahead of print] PMID: 29411349
- 72. Resnick B, Hebel JR, Gruber-Baldini AL, <u>Hicks GE</u>, Hochberg MC, Orwig D, Eastlack M, Magaziner J. The impact of body composition, pain and resilience on physical activity, physical function and physical performance at 2 months post hip fracture. Arch Gerontol Geriatr. 2018 Feb 15;76:34-40. doi: 10.1016/j.archger.2018.01.010. [Epub ahead of print] PMID: 29455057

- 73. Rathbun AM, Shardell MD, Stuart EA, Gruber-Baldini AL, Orwig D, Ostir GV, <u>Hicks GE</u>, Hochberg MC, Magaziner J. Persistence of depressive symptoms and gait speed recovery in older adults after hip fracture. Int J Geriatr Psychiatry. 2018 Feb 26. doi: 10.1002/gps.4864. [Epub ahead of print] PMID: 29480573
- 74. Gatchel RJ, Reuben DB, Dagenais S, Turk DC, Chou R, Hershey A, <u>Hicks G</u>, Licciardone JC, Horn SD. Research Agenda for the Prevention of Pain and Its Impact: Report of the Work Group on the Prevention of Acute and Chronic Pain of the Federal Pain Research Strategy. J Pain. 2018 Mar 22. pii: S1526-5900(18)30107-X. doi: 10.1016/j.jpain.2018.02.015. [Epub ahead of print] PMID: 29578089
- 75. Pugliese JM, Sions JM, Velasco TO, <u>Hicks GE</u>. Use of trunk muscle training and neuromuscular electrical stimulation to reduce pain and disability in an older adult with chronic low back pain: A case report. Physiother Theory Pract. 2018 Apr 4:1-8. doi: 10.1080/09593985.2018.1457745. [Epub ahead of print] PMID: 29617180
- 76. Simon CB, <u>Hicks GE</u>. Paradigm Shift in Geriatric Low Back Pain Management: Integrating Influences, Experiences, and Consequences. Phys Ther. 2018 May 1;98(5):434-446. doi: 10.1093/ptj/pzy028. PMID: 29669088
- 77. Coyle PC, Pugliese JM, Sions JM, Eskander MS, Schrack JA, <u>Hicks GE</u>. Energy Impairments in Older Adults with Low Back Pain and Radiculopathy: A Matched Case-Control Study. Arch Phys Med Rehabil. 2018 Nov;99(11):2251-2256. doi: 10.1016/j.apmr.2018.03.016. Epub 2018 Apr 24. PubMed PMID: 29698638; PubMed Central PMCID: PMC6200651.
- 78. Orwig D, Hochberg MC, Gruber-Baldini AL, Resnick B, Miller RR, <u>Hicks GE</u>, Cappola AR, Shardell M, Sterling R, Hebel JR, Johnson R, Magaziner J. Examining Differences in Recovery Outcomes Between Male and Female Hip Fracture Patients: Design and Baseline Results of a Prospective Cohort Study from the Baltimore Hip Studies. J Frailty Aging. 2018;7(3):162-169. doi: 10.14283/jfa.2018.15. PMID:30095146
- <u>Hicks GE</u>, Shardell MD, Miller RR, Eastlack M, Orwig DL, Goodpaster BH, Chomentowski PJ, Hochberg MC, Rathbun AM, Cauley JA, Harris T, Satterfield S, Schafer AL, Magaziner J. Trunk Muscle Composition 2 Months after Hip Fracture: Findings from the Baltimore Hip Studies. Arch Phys Med Rehabil. 2018 Dec 19. pii: S0003-9993(18)31537-5. doi: 10.1016/j.apmr.2018.10.023. [Epub ahead of print] PMID:30578772
- Coyle PC, Pugliese JM, Sions JM, Eskander MS, Schrack JA, <u>Hicks GE</u>. Pain Provocation and the Energy Cost of Walking: A Matched Comparison Study of Older Adults with and without Chronic Low Back Pain with Radiculopathy. J Geriatr Phys Ther. 2019 Apr 15. doi: 10.1519/JPT.000000000000212. [Epub ahead of print] PMID: 30998562
- <u>Hicks GE</u>. Addressing Balance, Mobility and Falls: Are We Moving the Needle on Fall Prevention? J Gerontol A Biol Sci Med Sci. 2019 Mar 20. pii: glz064. doi: 10.1093/gerona/glz064. [Epub ahead of print] PMID:30892593

- Sions JM, Crippen DC, <u>Hicks GE</u>, Alroumi AM, Manal TJ, Pohlig RT. Exploring Neuromuscular Electrical Stimulation Intensity Effects on Multifidus Muscle Activity in Adults With Chronic Low Back Pain: An Ultrasound Imaging-Informed Investigation. Clin Med Insights Arthritis Musculoskelet Disord. 2019 May 20;12:1179544119849570. doi: 10.1177/1179544119849570. eCollection 2019. PMID: 31205429
- 83. Sung W, <u>Hicks GE</u>, Ebaugh D, Smith SS, Stackhouse S, Wattananon P, Silfies SP. Individuals With and Without Low Back Pain Use Different Motor Control Strategies to Achieve Spinal Stiffness During the Prone Instability Test. J Orthop Sports Phys Ther. 2019 Dec;49(12):899-907. doi: 10.2519/jospt.2019.8577. Epub 2019 Aug 3. PMID: 31378122
- 84. Rathbun AM, Magaziner J, Shardell MD, Beck TJ, Yerges-Armstrong LM, Orwig D, <u>Hicks GE</u>, Ryan AS, Hochberg MC. Differences in geometric strength at the contralateral hip between men with hip fracture and non-fractured comparators. Bone. 2020 Mar;132:115187. doi: 10.1016/j.bone.2019.115187. Epub 2019 Dec 5. PMID: 31812699
- Beisheim EH, Seth M, Horne JR, <u>Hicks GE</u>, Pohlig RT, Sions JM. Sex-specific Differences in Multisite Pain Presentation among Adults with Lower-Limb Loss. *Pain Practice*. 2021 Apr;21(4):419-427. https://doi.org/10.1111/papr.12969. PMID: 33251680
- 86. Coyle PC, O'Brien VA, Edwards DG, Pohlig RT, <u>Hicks GE</u>. Markers of Cardiovascular Health in Older Adults with and without Chronic Low Back and Radicular Leg Pain: A Comparative Analysis. Pain Med. 2021 Feb 15:pnaa426. doi: 10.1093/pm/pnaa426. Online ahead of print. PMID: 33585935
- 87. Knox PJ, Coyle PC, Pugliese JM, Pohlig RT, Sions JM, <u>Hicks GE</u>. Hip osteoarthritis signs and symptoms are associated with increased fall risk among community-dwelling older adults with chronic low back pain: a prospective study. Arthritis Res Ther. 2021 Mar 3;23(1):71. doi: 10.1186/s13075-021-02455-5. PMID: 33658074; PMCID: PMC7927382.
- Shardell MD, Cappola AR, Guralnik JM, <u>Hicks GE</u>, Kritchevsky SB, Simonsick EM, Ferrucci L, Semba RD, Shaffer NC, Harris TB, Eiriksdottir G, Gudnason V, Cotch MF, Orwoll E, Ensrud KE, Cawthon PM. Sex-specific 25-hydroxyvitamin D threshold concentrations for functional outcomes in older adults: PRoject on Optimal VItamin D in Older adults (PROVIDO). Am J Clin Nutr. 2021 Apr 7:nqab025. doi: 10.1093/ajcn/nqab025. Online ahead of print. PMID: 33826696
- Sions JM, Beisheim EH, Hoggarth MA, Elliott JM, <u>Hicks GE</u>, Pohlig RT, Seth M. Trunk Muscle Characteristics: Differences Between Sedentary Adults with and without Unilateral Lower-Limb Amputation. Arch Phys Med Rehabil. 2021 Jul;102(7):1331-1339. doi: 10.1016/j.apmr.2021.02.008. Epub 2021 Mar 5. PMID: 33684366
- 90. Coyle PC, Sions JM, O'Brien V, Pohlig R, <u>Hicks GE</u>. Hip range of motion and strength predict 12-month physical function outcomes in older adults with chronic

low back pain – the Delaware Spine Studies. ACR Open Rheumatol. 2021 Sep 15. doi: 10.1002/acr2.11342. Online ahead of print. PMID: 34524738

- Knox PJ, Pohlig RT, Pugliese JM, Coyle PC, Sions JM, <u>Hicks GE</u>. Aberrant Lumbopelvic Movements Negatively Affect Prospective Physical Function in Older Adults with Chronic Low Back Pain. Arch Phys Med Rehabil. 2021 Sep 18:S0003-9993(21)01424-6. doi: 10.1016/j.apmr.2021.08.014. Online ahead of print. PMID: 34547273
- 92. Beisheim EH, Pohlig RT, Medina J, Hicks GE, Sions JM. Body Representation among Adults with Phantom Limb Pain: Results from a Foot Identification Task. Eur J Pain. 2021 Sep 7. doi: 10.1002/ejp.1860. Online ahead of print. PMID: 34490685
- 93. Orwig DL, Abraham DS, Guralnik JM, Hochberg MC, Cappola AR, Golden J, Gruber-Baldini A, Hicks GE, Miller RR, Resnick B, Shardell M, Sterling RS, Bajracharya R, Magaziner J. Sex Differences in Recovery Across Multiple Domains among Older Adults with Hip Fracture. J Gerontol A Biol Sci Med Sci. 2021 Sep 23:glab271. doi: 10.1093/gerona/glab271. Online ahead of print. PMID: 34555162
- 94. <u>Hicks GE</u>, Pohlig RT, Coyle PC, Sions JM. Classification of geriatric low back pain based on hip characteristics with a 12-month longitudinal exploration of clinical outcomes: findings from Delaware Spine Studies. Phys Ther [in press]
- 95. Beisheim EH, Pohlig RT, Hicks GE, Horne JR, Medina J, Sions JM. Mechanical Pain Sensitivity in Post-Amputation Pain. Clin J Pain [in press]
- 96. Pugliese JM, Coyle PC, Sions JM, Piva SR, George SZ, Weiner DK, Simon CB <u>Hicks GE</u>. The Manual Therapy and Strengthening for the Hip (MASH) trial: Protocol for a Multisite Randomized Trial of a Subgroup of Older Adults with Chronic Back and Hip Pain. Phys Ther [in press]
- 97. Seth M, Coyle PC, Pohlig RT, Beisheim EH, Horne JR, <u>Hicks GE</u>, Sions JM. Gait asymmetry is associated with performance-based physical function among adults with lower-limb amputation. Physiother Theory Pract [in press]
- 98. Seth M, Beisheim EH, Pohlig RT, Horne JR, <u>Hicks GE</u>, Sions JM. Vibration sensitivity is associated with functional balance following unilateral transtibial amputation. Archives of Rehabilitation Research and Clinical Translation [in press]
- 99. Knox PJ, Pohlig RT, Pugliese JM, Coyle PC, Sions JM, Simon CB, <u>Hicks GE</u>. Standardized Assessment of Movement-Evoked Pain Ratings Contributes to Functional Outcomes in Older Adults with Chronic Low Back Pain. Clinical J Pain [in revision]
- 100. Beisheim EH, Pohlig RT, <u>Hicks GE</u>, Horne JR, Sions JM. Post-Amputation Pain: Comparing Pain Presentations between Adults with and without Increased Amputated-Region Sensitivity. Pain Medicine [in submission]
- 101. Seth M, Pohlig RT, Beisheim EH, Stauffer SJ, Horne J, <u>Hicks GE</u>, Sions JM. Residual and sound limb hip strength distinguish between sedentary and non-

sedentary adults with transtibial amputation. Disability and Rehabilitation: Assistive Technology [in submission]

102. Coyle PC, Pohlig RT, Knox P, Pugliese JM, Sions JM, <u>Hicks GE</u>. Trajectories of physical function and disability over 12 months in older adults with chronic low back pain. Arthritis Care & Research [in submission]

Non-Refereed Journals:

Fritz JM, <u>Hicks GE</u>, Mishock J. The Role of Muscle Strength in Low Back Pain. *Orthopaedic Physical Therapy Clinics of North America* 2000; 9(4):529-548.

Book Chapter:

Fritz JM, <u>Hicks GE</u>. Exercise Protocols for Low Back Pain. In: Liemohn W, editor. *Exercise Prescription and the Back*. New York: McGraw-Hill, 2001: 167-182.

<u>Hicks GE</u>, Miller RR. Physiological Resilience. In: Resnick B, Roberta K, and Gwyther L, editors. *The Handbook of Resilience in Aging: The Key to Successful Aging*. New York: Springer Publishing, 2010

Abstracted Scientific Presentations:

- 1. <u>Hicks GE</u>, Fritz JM, Mishock J. The Reliability of Clinical Examination Measures Used for Patients with Suspected Lumbar Segmental Instability. Combined Sections Meeting of the American Physical Therapy Association, February 2000.
- 2. Piva SR, Erhard RE, Childs JD, <u>Hicks GE</u>. Reliability of measuring iliac crest height in standing and in sitting positions using a new measurement device. Fourth Interdisciplinary World Congress on Low Back and Pelvic Pain, Montreal Canada, November 2001.
- 3. <u>Hicks GE</u>, George SZ, Vogt MT, Nevitt MA, Cauley JA. Measurement of Lumbar Lordosis: Inter-Rater Reliability and Longitudinal Variation. Annual Meeting of the International Society for the Study of the Lumbar Spine, Cleveland, OH, 2002.
- 4. George SZ, <u>Hicks GE</u>, Vogt MT, Nevitt MA, Cauley JA. The Relationship Between Lumbar Lordosis and Radiological Variables and Lumbar Lordosis and Clinical Variables in Older, African-American Women. Annual Meeting of the International Society for the Study of the Lumbar Spine, Cleveland, OH, 2002.
- 5. VanSwearingen J, Brach JS, <u>Hicks GE</u>. Relation of Pathology, Impairment, and Disability in Women with Osteoarthritis of the Knee. Physical Therapy 2003: Annual Conference and Exposition of the American Physical Therapy Association.

- 6. VanSwearingen J, Brach JS, <u>Hicks GE</u>. Reliability of Performance-Based Measures of Impairment and Disability in Women with Osteoarthritis of the Knee. Physical Therapy 2003: Annual Conference and Exposition of the American Physical Therapy Association.
- <u>Hicks GE</u>, Simonsick EM, Harris TB, Newman AB, Weiner D, Nevitt M, Tylavsky F. Cross-sectional Associations Between Trunk Muscle Composition, Back Pain and Physical Function in the Health ABC Study. 56th Annual Scientific Meeting for the Gerontological Society of America, November 2003.
- 8. <u>Hicks GE</u>, Fritz JM, Delitto A, McGill SM. Preliminary Clinical Prediction Rule for Determining Response to a Lumbar Stabilization Program. Combined Sections Meeting of the American Physical Therapy Association, February 2004.
- <u>Hicks GE</u>, Simonsick EM, Harris TB, Newman AB, Weiner D, Nevitt M, Tylavsky F. Trunk Muscle Composition as a Predictor of Physical Function in the Health ABC Study: The Moderating Role of Back Pain. 57th Annual Scientific Meeting for the Gerontological Society of America, November 2004.
- Miller RR, Cappola AR, Shardell M, <u>Hicks GE</u>, Hawkes W, Hebel JR, Yu-Yahiro J, Magaziner J. Inflammation And Muscle Strength In The Year Following Hip Fracture: The Baltimore Hip Studies. Presented at the Gerontological Society of America Annual Meeting, Dallas, TX, November, 2006.
- <u>Hicks GE</u>, Shardell MD, Miller RR, Bandinelli S, Guralnik JM, Cherubini A, Lauretani F, Ferrucci L. Low 25 (OH) D concentrations are associated with significant back pain in older women, not men: The InCHIANTI study. Presented at the American Geriatrics Society Annual Meeting, Seattle, WA, May 2007.
- Miller RR, <u>Hicks GE</u>, Shardell MD, Orwig D, Hawkes WG, Yu-Yahiro JA, Magaziner J. Effect of Home-Based Exercise on Markers of Inflammation in the Year Post Hip Fracture. Presented at the Gerontological Society of America Annual Meeting, San Francisco, CA, November 2007.
- <u>Hicks GE</u>, Shardell MD, Miller RR, Newman AB, Spencer M, Satterfield S, Nevitt M, Simonsick EM. Are There Racial Differences in Musculoskeletal Pain in Older Adults? Findings from the Health, Aging and Body Composition Study. Presented at the Gerontological Society of America Annual Meeting, San Francisco, CA, November 2007.
- 14. <u>Hicks GE</u>, Gaines JM, Simonsick EM. Impact of Low Back Pain on Health-Related Quality of Life in Continuing Care Retirement Communities. Presented at the Gerontological Society of America Annual Meeting, San Francisco, CA, November 2007.
- 15. <u>Hicks GE</u>, Shardell M, D'Adamo C, Magaziner J, Orwig D, Miller R. Association of Serum Carotenoid Levels with Recovery of Physical Function after Hip Fracture: The Baltimore Hip Studies. Gerontological Society of America; National Harbor, Maryland. November 2008.

- Andersen D, Miller R, Shardell M, <u>Hicks GE</u>, Magaziner J, Orwig D. Association of Pre-Fracture Frailty with Inflammatory Response Following Hip Fracture. Gerontological Society of America; National Harbor, Maryland. November 2008
- D'Adamo C, Shardell M, Miller R, Orwig D, Magaziner J, <u>Hicks GE</u>. Associations between Serum Antioxidants and Inflammatory Markers in Older Adults after Hip Fracture. Gerontological Society of America; National Harbor, Maryland. November 2008
- Matheny M, Shardell M, <u>Hicks GE</u>, Miller R, Magaziner J, Orwig D. Association between Inflammatory Markers and Depressive Symptoms in Older Adults after Hip Fracture. Gerontological Society of America; National Harbor, Maryland. November 2008
- 19. Chan J, Miller R, Shardell M, <u>Hicks GE</u>, Magaziner J, Orwig D. The Effect of Inflammatory Markers on Bone Mineral Density Following Hip Fracture. Gerontological Society of America; National Harbor, Maryland. November 2008
- D'Adamo, <u>Shardell M</u>, Miller RR, Hicks G, Orwig D, Hochberg M, Ferrucci L, Magaziner J. The associations between baseline serum vitamin E concentrations and recovery of physical function during the year after hip fracture. Gerontologist, 49:211-211, 2009 Oct.
- 21. <u>Hicks GE</u>, Shardell M, Miller RR, Alley D, Cherubini A, Bandinelli S, Ferrucci L. Longitudinal associations of vitamin D with muscle composition and strength: The InChianti Study. Gerontologist, 49:215-215, 2009 Oct.
- Shardell M, <u>Hicks GE</u>, Miller RR, Alley D, Cherubini A, Bandinelli S, Ferrucci L. Associations of 25(OH)D levels with decline and recovery from the prefrail state: The InChianti Study. Gerontologist, 49:215-215, 2009 Oct.
- Miller RR, <u>Hicks GE</u>, Shardell M, Orwig D, Yu-Yahiro J, Hochberg M, Streeten EA, Magaziner J. Longitudinal associations of serum vitamin D levels with recovery of walking ability following hip fracture: The Baltimore Hip Studies. Gerontologist, 49:215-215, 2009 Oct.
- 24. Eastlack M, Miller RR, <u>Hicks GE</u>, Goodpaster B. Thigh muscle composition findings 2 months after admission for hip fracture: The Baltimore Hip Studies. Gerontologist, 49:374-374, 2009 Oct.
- 25. Shardell M, Alley DE, Miller RR, <u>Hicks GE</u>. Joint effects of physical activity and vitamin D on longevity: NHANES III. Gerontologist, 50:439, 2010 Oct.
- Miller RR, Shardell M, Alley DE, <u>Hicks GE</u>, Anderson D, Orwig D, Yu-Yahiro J, Magaziner J. Pre-fracture physical activity and post-fracture inflammation: The Baltimore Hip Studies. Gerontologist, 50:439, 2010 Oct
- 27. <u>Hicks GE</u>, Shardell M, Alley DE, Miller RR, D'Adamo C, Magaziner J. Association of serum carotenoid levels with recovery of physical activity after hip fracture: The Baltimore Hip Studies. Gerontologist, 50:439, 2010 Oct.

- 28. <u>Hicks GE</u>, Sions JM, Velasco T. Spatiotemporal parameters of gait in older adults with and without chronic low back pain. Transactions Vol. 36, Long Beach, CA, 2011 Annual Meeting of the Orthopaedic Research Society.
- 29. Sions JM, Velasco T, <u>Hicks GE</u>. Rehabilitative ultrasound imaging of the posterior trunk muscles in older adults with and without chronic low back pain: an investigation of measurement and procedural reliability. Transactions Vol. 36, Long Beach, CA, 2011 Annual Meeting of the Orthopaedic Research Society.
- 30. <u>Hicks GE</u>, Sions JM. Chronic Low Back Pain and Performance-Based Function in Older Adults: A Case-Control Study. J Orthop Sports Phys Ther 2011;41(1): A29
- Sions JM, <u>Hicks GE</u>. Asymmetry of the Lumbar Multifidi in Older Adults with Chronic Low Back Pain as Compared to Healthy Controls. J Orthop Sports Phys Ther 2011;41(1): A13
- 32. <u>Hicks GE,</u> Sions JM, Velasco T. The Relationship between Hip Impairments and Chronic Low Back Pain in Older Adults: A Preliminary Study. Osteoarthritis and Cartilage Vol. 19 Supplement 1, Page S214, San Diego, CA, 2011 World Congress on Osteoarthritis.
- Sions JM, <u>Hicks GE</u>. Criterion Validity of Rehabilitative Ultrasound Imaging for the Paraspinal Muscles in Older Adults. Presented at the Combined Sections Meeting of the American Physical Therapy Association, February 2012.
- 34. Velasco T, Sions JM, <u>Hicks GE</u>. Hip Manual Therapy for Older Adults with a Primary Complaint of Chronic Low Back Pain and Co-Existing Hip Impairments: A Case Series. Presented at the Combined Sections Meeting of the American Physical Therapy Association, February 2012.
- 35. <u>Hicks GE</u>, Sions JM, Velasco T, Shardell M. Hip Impairments and Function in Older Adults with Chronic Low Back Pain: The Delaware Spine Studies. Gerontological Society of America; San Diego, CA. November 2012.
- 36. Bean JF, Anderson DE, Latham N, Pensheng NI, Leveille SG, <u>Hicks GE</u>, Bouxsein ML, Jette AM. Two clinical measures that may be useful in evaluating trunk muscle composition and physiology among older primary care patients. International Conference on Frailty and Sarcopenia Research; Orlando, FL. December 2012.
- 37. <u>Hicks GE</u>, Manal TJ, Sions JM, Velasco T, Shardell M, Snyder-Mackler L. A trunk muscle training program augmented with neuromuscular electrical stimulation appears to improve function in older adults with chronic low back pain: A pilot randomized trial. Gerontological Society of America; New Orleans, LA. November 2013.
- Allen V, Sions JM, <u>Hicks GE</u>. Contributions of comorbidity burden to physical performance in older adults with chronic low back pain. Gerontological Society of America; New Orleans, LA. November 2013.

- 39. Sions JM, <u>Hicks GE</u>. High fear avoidance beliefs are associated with poorer physical performance in older adults with chronic low back pain. Gerontological Society of America; New Orleans, LA. November 2013.
- 40. Shardell M, <u>Hicks GE</u>, Ferrucci L. Causal inference in studies of older adults with dropout and death: Vitamin D and gait speed in the InChianti Study. Gerontological Society of America; New Orleans, LA. November 2013.
- 41. <u>Hicks GE</u>. Symposium: Exploring Function in the Older Adult with Chronic Low Back Pain: The Delaware Spine Studies. Gerontological Society of America; Washington, DC. November 2014.
 - a. Allen V, Coyle P, Sions JM, <u>Hicks GE</u>. Contributions of cardiovascular risk to physical performance in older adults with chronic low back pain.
 - b. Coyle P, Allen V, Velasco T, Sions JM, <u>Hicks GE</u>. Improved trunk mobility is linked to better physical function in older adults with chronic low back pain.
 - c. <u>Hicks GE</u>, Sions JM, Velasco T. Psychosocial Contributors to Differences in Performance-Based vs. Self-Reported Function Among Older Adults with Chronic Low Back Pain
 - d. Sions JM, <u>Hicks GE</u>. Chronic low back pain intervention: Exercise + NMES versus Exercise.
- 42. <u>Hicks GE</u>, Shardell M, Miller R, Orwig D, Hochberg M, Magaziner J. Trunk Muscle Composition 2 Months After Hip Fracture: The Baltimore Hip Studies. International Conference on Frailty and Sarcopenia Research; Boston, MA. April 2015.
- 43. Sions JM, Coyle P, Velasco, T, Elliott J, <u>Hicks GE</u>. Exploration of Trunk Muscle Composition and Select Physical Performance Measures: A Preliminary Analysis among Older Adults with and without Chronic Low Back Pain. International Conference on Frailty and Sarcopenia Research; Boston, MA. April 2015.
- Hicks GE, Sions JM, Velasco, T. Hip symptoms contribute to low back pain-related disability in older adults with a primary complaint of low back pain: The Delaware Spine Studies. Conference: World Congress of the Osteoarthritis-Research-Society-International (OARSI) on Osteoarthritis Location: Amsterdam, Netherlands. Date: MAR 31-APR 03, 2016. Osteoarthritis and Cartilage. Volume: 24 Supplement: S Pages: S439-S439. Published: APR 2016
- 45. <u>Hicks GE</u>, Sions JM, Velasco, T. Co-existing hip symptoms are associated with selfefficacy and pain-related fear in older adults with a primary complaint of low back pain: The Delaware Spine Studies. Conference: World Congress of the Osteoarthritis-Research-Society-International (OARSI) on Osteoarthritis Location: Amsterdam, Netherlands. Date: MAR 31-APR 03, 2016. Osteoarthritis and Cartilage. Volume: 24 Supplement: S Pages: S441-S441. Published: APR 2016
- 46. Sions JM, Coyle P, Velasco, T, Elliott J, <u>Hicks GE</u>. Older adults with low back pain who meet a clinical cluster for hip OA have ultrasound joint morphological findings consistent with hip OA. Conference: World Congress of the Osteoarthritis-Research-Society-International (OARSI) on Osteoarthritis Location: Amsterdam, Netherlands. Date: MAR 31-APR 03, 2016. Osteoarthritis and Cartilage. Volume: 24 Supplement: S Pages: S248-S248. Published: APR 2016

- 47. Coyle PC, McIntire R, Pohlig R, <u>Hicks GE</u>. The mediating role of depressive symptoms in the relationship between chronic pain and sedentary behavior in older adults: a secondary analysis of the Southeastern Pennsylvania Health Survey 2012. American Physical Therapy Association's Combined Sections Meeting; Anaheim, CA. February 2016.
- 48. Velasco TO, Sions JM, Coyle P, <u>Hicks GE</u>. A Comparison of Older Adults with and without Chronic Low Back Pain: Are Abdominal Muscle Differences Present at Rest and During a Straight Leg Raise? American Physical Therapy Association: Combined Sections Meeting; Anaheim, CA. February 2016.
- Sions JM, Coyle P, <u>Hicks GE</u>. Lumbar Exercises & Neuromuscular Electrical Stimulation versus Exercises Alone: Changes in Lumbar Multifidi Activity May be Related to Electrical Stimulation Intensity. American Physical Therapy Association: Combined Sections Meeting; Anaheim, CA. February 2016.
- 50. Sions JM, Coyle P, Velasco TO, <u>Hicks GE</u>. Multifidi Activity Helps to Explain Clinical Measures in Older Adults with Low Back Pain. American Institute of Ultrasound in Medicine Convention; New York, NY. March 2016.
- 51. Rathbun AM, Magaziner J, Shardell MD, Yerges-Armstrong LM, Orwig D, <u>Hicks GE</u>, Hochberg MC. Older men who sustain a hip fracture experience greater than expected declines in bone mineral density at the contralateral hip. Annual Meeting of the American Society for Bone and Mineral Research; Denver, CO. Sept 2017

Major Invited Speeches and Lectures

Fritz JM and <u>Hicks GE</u>. Diagnosis and Treatment of Lumbar Segmental Instability. Annual Conference and Exposition of the American Physical Therapy Association, June 2000.

Fritz JM and <u>Hicks GE</u>. Segmental Instability of the Lumbar Spine: Principles and Application to Physical Therapy Practice. Annual Meeting of the West Virginia Physical Therapy Association, October 2000.

<u>Hicks GE</u>. An Evidence-Based Approach to Management of Lumbar "Instability". University of Pittsburgh and Centers for Rehab Services, March 2006.

Hicks GE. Lumbar Segmental Instability: Prognosis and Treatment. University of Zurich, Zurich, Switzerland, April 2006.

Hicks GE and Manal TJ. Translating the Evidence: Monday Morning Techniques Involving Acute Low Back Pain Treatment Classification. Annual Conference and Exposition of the American Physical Therapy Association, June 2007.

<u>Hicks GE</u> and Manal TJ. Treatment Based Classification of the Spine: An Evidence-Based Journey for the Physical Therapist. Five-day course sponsored by the Israeli Physical Therapy Society. Haifa, Israel. November 2007.

<u>Hicks GE</u>. Evaluation and Management of Lumbar "Instability." Tel Aviv University, Tel Aviv, Israel, November 2007.

<u>Hicks GE</u> and Soriano R. Multidisciplinary Clinical Skills Workshop: Low Back Pain in the Elderly. American Geriatrics Society Annual Meeting, May 2008.

<u>Hicks GE</u>. Correlates and Consequences of Low Back Pain in the Elderly. Christiana Care Center on Outcomes Research, Newark, DE, September 2008.

<u>Hicks GE</u> and Soriano R. Multidisciplinary Clinical Skills Workshop: Low Back Pain in the Elderly. American Geriatrics Society Annual Meeting, May 2009.

<u>Hicks GE</u>. Factors that Predict Participation in an Adapted Physical Activity Program for Older Adults with Low Back Pain. Dipartimento delle Fragilità, Azienda Unità Sanitaria Locale 11 di Empoli, Empoli, Italy, July 2009.

<u>Hicks GE</u>, Manal TJ, Sions JM and Velasco T. Low Back Pain in Older Adults: Special Considerations and Understanding Can Lead to Improved Function. Combined Sections Meeting of the American Physical Therapy Association, February 2010.

<u>Hicks GE</u> and Soriano R. Multidisciplinary Clinical Skills Workshop: Low Back Pain in the Elderly. American Geriatrics Society Annual Meeting, May 2010.

Hicks GE. Keynote Address: Diagnosis vs. Classification. Israeli Physical Therapy Society 10th Annual Meeting. Tel Aviv, Israel. May 2010

Hicks GE. Adaptive Physical Activity Program for Older Adults with Back Pain. Israeli Physical Therapy Society 10th Annual Meeting. Tel Aviv, Israel. May 2010

Hicks GE. Degenerative Lumbar Disc and Facet Disease in Older Adults. Israeli Physical Therapy Society 10th Annual Meeting. Tel Aviv, Israel. May 2010

<u>Hicks GE</u>. Evaluation and Treatment of Low Back Pain in Older Adults. Two-day course sponsored by the Israeli Physical Therapy Society. Haifa and Jerusalem, Israel. May 2010.

<u>Hicks GE</u>. Chronic Low Back Pain in the Older Adult: A New Perspective on Pain Management. Fall 2010 Rehabilitation Research Seminar Series. University of Florida, College of Public Health and Health Professions. October 2010.

<u>Hicks GE</u>. Developing Innovative Interventions for Active Older Adults with Chronic Low Back Pain. Third Annual Delaware Orthopaedic Symposium. October 2010.

<u>Hicks GE</u>, Manal TJ, Sions JM and Velasco T. Challenging Ageism in Outpatient Physical Therapy Orthopaedics: Applying Evidence to the Evaluation and Treatment of Older Adults with Low Back Pain. Combined Sections Meeting of the American Physical Therapy Association, February 2011.

<u>Hicks GE</u>. Weekend Intensive Course in the Evaluation and Treatment of the Lumbar Spine. New York University Clinical Residency Advanced Certificate Program in Orthopedic Physical Therapy. March 2011.

<u>Hicks GE</u>. Multidisciplinary Clinical Skills Workshop: Low Back Pain in the Elderly. American Geriatrics Society Annual Meeting, May 2011.

<u>Hicks GE</u>. The APA Chronic Back Pain Model: Exploring Factors Associated with Success and Adherence. The Management of Chronicity Conference. Istituto Superiore di Sanita, Rome, Italy October 2011.

<u>Hicks GE</u>. Adapted Physical Activity and Rehabilitation. American Academy of Physical Medicine and Rehabilitation Annual Meeting. Orlando, FL, November 2011.

<u>Hicks GE</u>. Multidisciplinary Clinical Skills Workshop: Assistive Devices. American Geriatrics Society Annual Meeting, May 2012.

<u>Hicks GE</u>. Focusing on Physical Function in Older Adults with Chronic Low Back Pain. Boston Research Outcomes Center Research Seminar Series, Boston University School of Public Health, Boston, MA, May 2012.

<u>Hicks GE</u>. Developing a New Perspective on Pain Management for Older Adults with Chronic Low Back Pain. Christiana Care Center on Outcomes Research, Newark, DE, September 2012.

<u>Hicks GE</u>. The Role of Physical Function in the Management of Older Adults with Chronic Low Back Pain. Georgia Health Sciences University, Augusta, GA, November 2012.

<u>Hicks GE</u>. G-Codes: Implementation. Ammon Education Center, Christiana Care Health Services, Newark, DE, May 2013

<u>Hicks GE</u>. Provider Engagement in Research. DE-CTR ACCEL Conference—Learning from Each Other: Building Academic-Provider-Community Partnerships in Research, Wilmington, DE, May 2014

<u>Hicks GE</u>. Developing a New Perspective on Pain Management for Older Adults: The Journey from Post-Doc to Established Investigator. National Institute on Aging, Baltimore, MD, January 2015.

<u>Hicks GE</u>. Keynote Speech: Building Your Research Team: One Pathway to Developing an Independently Functioning Lab. Thomas Jefferson College of Health Professions Research Day, Philadelphia, PA, May 2015.

<u>Hicks GE</u>. A Primer on Incorporating Evidence-Based Principles into Everyday Clinical Practice. Christiana Care Health Services, Newark, DE, October 2015.

<u>Hicks GE</u>. Grand Rounds: Function-Focused Management of Low Back Pain in the Older Adult. Northwestern University, Chicago, IL, October 2015.

<u>Hicks GE</u>. Pain: A Rehabilitation Perspective. National Center for Medical Rehabilitation Research Advisory Board Meeting (NCMRR-NIH). Bethesda, MD, December 2015.

<u>Hicks GE</u>. Developing a New Perspective on Pain Management for Older Adults with Chronic Low Back Pain. Ohio University, Athens, OH, April 2016.

<u>Hicks GE</u>. Ellen Ross Memorial Lecture. Rutgers University, Newark, NJ, April 2016.

<u>Hicks GE</u>. Preventing Secondary Disability in Older Adults with Chronic Low Back Pain. NIH Conference (Rehabilitation Research at NIH: Moving the Field Forward). Bethesda, MD, May 2016.

<u>Hicks GE</u>. Keynote Speech: Arcadia's Health Policy and Practice Management PT Faculty Institute. Glenside, PA, August 2016

<u>Hicks GE</u>. Developing a Comprehensive Treatment Approach for Older Adults with Chronic Low Back Pain. MGH Institute of Health Professions, Boston, MA, October 2016.

<u>Hicks GE</u>. Best Practices for Diversity in Physical Therapy Education. University of Alabama at Birmingham, Birmingham, AL, January 2017.

<u>Hicks GE</u>. Keynote Talk for Rehabilitation Research Retreat: Classification and Treatment of Older Adults with Chronic Low Back Pain. University of Colorado, Denver, CO, April 2017.

<u>Hicks GE</u> and Simon CB. Geriatric Low Back Pain: Managing Influences, Experiences and Consequences. Combined Sections Meeting of the American Physical Therapy Association, January 2019.

<u>Hicks GE</u>. Developing a Function-Focused Perspective on Pain Management for Older Adults with Chronic Low Back Pain. Duke Orthopaedic and Rehabilitation Seminar Series. Duke University, Durham, NC, April 2019.

<u>Hicks GE</u>. Who Do We Want To Be? Responsible Stewardship of Our Profession. 24th Annual Endowed Scully Scholar Lecture Series. University of Pittsburgh, Pittsburgh, PA, October 2019.

<u>Hicks GE</u>. Who Do We Want To Be? Responsible Stewardship of our Profession Inaugural Lynda D. Woodruff Lecture, Physical Therapy Leadership Institute and APTA, July 2020.

<u>Hicks GE</u>. Plant the Tree Now! Diversity, Equity and Inclusion in Physical Therapy. Marilyn Gossman Endowed Lecture. University of Alabama at Birmingham, Birmingham, AL, March 2021.

<u>Hicks GE</u>. Barbara C. White Endowed Lecture. University of Florida, Gainesville, FL, April 2021.

<u>Hicks GE</u>. Understanding the Role of Co-Existing Hip Impairments in Geriatric Low Back Pain. Grand Rounds: Health and Rehabilitation Sciences, Ohio State University, Columbus, OH, April 2021.

<u>Hicks GE</u>. Diversity, Equity and Inclusion in Rehabilitation. Invited Talk for the National Advisory Board on Medical Rehabilitation Research, NIH, Bethesda, MD, May 2021.