



## **JUDITH M. BURNFIELD, PhD, PT**

**Vice President of Research**

**Director, Institute for Rehabilitation Science and Engineering**

**Clifton Chair in Physical Therapy and Movement Science**

### **CONTACT**

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### **Mailing Address**

Institute for Rehabilitation Science  
and Engineering  
Madonna Rehabilitation Hospital  
5401 South Street  
Lincoln, NE 68506

### **EDUCATION**

Postdoctoral Fellowship (2004). Pathokinesiology Laboratory, Los Amigos  
Research and Education Institute, Downey, CA

PhD Biokinesiology (2003). University of Southern California, Los Angeles, CA

B.S. Physical Therapy (1986). State University of New York at Buffalo, Buffalo, NY

### **POSITIONS and APPOINTMENTS**

- |                |  |
|----------------|--|
| 2023 – present | <b><i>Vice President of Research, Director Institute for Rehabilitation Science and Engineering, Clifton Chair in Physical Therapy and Movement Science</i></b><br>Institute for Rehabilitation Science and Engineering<br>Madonna Rehabilitation Hospitals, Lincoln, NE |
| 2023 – present | <b><i>Adjunct Faculty Member</i></b><br>Department of Mechanical and Materials Engineering<br>University of Nebraska, Lincoln, NE  |
| 2022 - present | <b><i>Graduate Faculty, University of Nebraska</i></b><br>University of Nebraska Medical Center, Omaha, NE   |
| 2021 – present | <b><i>Hanger Institute for Clinical Research and Education Advisory Board</i></b><br>Hanger Institute for Clinical Research and Education, LLC<br>Austin, TX   |

- 2020 - present     **Adjunct Assistant Professor**  
Department of Physical Medicine and Rehabilitation  
College of Medicine  
University of Nebraska Medical Center, Omaha, NE
- 2010 - present     **Adjunct Professor**  
Department of Physical Therapy  
University of South Dakota, School of Health Sciences
- 2006 - present     **Adjunct Assistant Professor**  
Department of Biological Systems Engineering  
University of Nebraska, Lincoln, NE
- 2007 - 2022        **Director Institute for Rehabilitation Science and Engineering, Director  
Movement and Neurosciences Center, Clifton Chair in Physical  
Therapy and Movement Science**  
Institute for Rehabilitation Science and Engineering  
Madonna Rehabilitation Hospitals, Lincoln, NE
- 2013 - 2019        **Adjunct Professor**  
Department of Mechanical and Materials Engineering  
University of Nebraska, Lincoln, NE
- 2005 – 2017        **Assistant Clinical Professor of Physical Therapy**  
School of Pharmacy and Health Professions  
Creighton University, Omaha, NE
- 2005 - 2017        **Adjunct Assistant Professor**  
Division of Physical Therapy Education  
University of Nebraska Medical Center, Omaha, NE
- 2013 - 2015        **Director Nebraska Athletic Performance Laboratory**  
University of Nebraska Athletics  
University of Nebraska, Lincoln, NE
- 2008 - 2013        **Adjunct Assistant Professor**  
Department of Mechanical Engineering  
University of Nebraska, Lincoln, NE
- 2005 - 2011        **Adjunct Assistant Professor**  
Department of Special Education and Communication Disorders  
University of Nebraska, Lincoln, NE
- 2003 - 2012        **Assistant Professor of Clinical Physical Therapy**  
Department of Biokinesiology and Physical Therapy  
University of Southern California, Los Angeles, CA

- 2004 - 2007      **Director, Movement Sciences Center**  
**Clifton Chair in Physical Therapy and Movement Science**  
Institute for Rehabilitation Science and Engineering  
Madonna Rehabilitation Hospital, Lincoln, NE
- 2003, 2004      **Instructor, Kinesiology**  
Department of Physical Therapy  
Mount St. Mary's College, Los Angeles, CA
- 2002 - 2003      **Instructor, Observational Gait Analysis**  
Department of Biokinesiology and Physical Therapy  
University of Southern California, Los Angeles, CA
- 1996 - 2003      **Research Physical Therapist**  
Pathokinesiology Laboratory  
Rancho Los Amigos National Rehabilitation Center, Downey, CA
- 2002              **Instructor, Biomechanics**  
Department of Physical Therapy  
Mount St. Mary's College, Los Angeles, CA
- 1997 - 2001      **Co-Instructor, Observational Gait Analysis**  
Department of Biokinesiology and Physical Therapy  
University of Southern California, Los Angeles, CA
- 1996 - 1999      **Teaching Assistant, Neuroanatomy**  
Department of Biokinesiology and Physical Therapy  
University of Southern California, Los Angeles, CA
- 1996              **Interim Director**  
Physical Therapy Department  
Rancho Los Amigos National Rehabilitation Center, Downey, CA
- 1993 - 1995      **Instructional Program Director**  
Physical Therapy Department  
Rancho Los Amigos National Rehabilitation Center, Downey, CA
- 1988 - 1994      **Instructor, Prosthetics and Orthotics**  
Physical Therapist Assistant Program  
Cerritos Community College, Norwalk, CA
- 1990 - 1993      **Physical Therapy Instructor, Outpatient/Gerontology Services**  
Physical Therapy Department  
Rancho Los Amigos National Rehabilitation Center, Downey, CA

- 1990 - 1991      **Research Assistant, NIDRR grant**  
The effect of electrical stimulation on healing rate in diabetic and spinal  
cord injured patients  
University of Southern California, Los Angeles, CA
- 1988 - 1990      **Physical Therapist II, Ortho-Diabetes and Stroke Services**  
Physical Therapy Department  
Rancho Los Amigos National Rehabilitation Center, Downey, CA
- 1986 - 1988      **Physical Therapist I, Ortho-Diabetes Service**  
Physical Therapy Department  
Rancho Los Amigos National Rehabilitation Center, Downey, CA
- 1986              **Staff Physical Therapist, Inpatient and Outpatient Services**  
Physical Therapy Department  
Kenmore Mercy Hospital, Kenmore, NY

## **CONTRACTS and GRANTS**

### **Current Research**

*COVID-19 Neuro Databank/Biobank (“NeuroCOVID Study”).* Role: Site Principal Investigator. NIH/NINDS (FAIN: U24NS113844). 2022-2023.

*Developing a Model System of Rehabilitation Care for Patients Post-COVID-19.* Role: Project Director. U.S. Department of the Treasury, Coronavirus State and Local Fiscal Recovery Funds via subaward from Department of Health and Human Services (FAIN: SLFRP1965). 2022 to 2024.

*Developing a Model System of Rehabilitation Care for Patients Post-COVID-19.* Role: Principal Investigator. U.S. Department of the Treasury, Rescue Act Funds via subaward from Douglas County, NE (FAIN: SLFRP1615). 2022 to 2026.

*Recovery After Transfer to a Long-Term Acute Care Hospital for COVID-19 (RAFT COVID) among Older Adults.* Role: NALTH-RAFT COVID Steering Committee member. The Donaghue Foundation Another Look: Research to Improve Health for Older Adults in Long Term Care Facilities. 2022 (collaborative analysis and dissemination continues).

*Recovery After Transfer from Hospital to LTACH (RAFT) Study for COVID-19.* Role: NALTH-RAFT COVID Steering Committee member. University of California – San Francisco and National Association of Long Term Hospitals. 2020 to 2022 (collaborative analysis and dissemination continues).

### **Select Examples of Previous Research**

*Development of a Digital Monitoring System to Reduce Risk of Hospital-Acquired Pressure Injuries.* Site Principal Investigator. NIH - NINR (Federal Award Number 1R43NR019556-01). 2020 to 2022.

*Modular Self-Reconfigurable Robot for Autonomous Rehabilitation Assistance in Daily Living Tasks for Spinal Cord Injury Patients.* Co-Principal Investigator. University of Nebraska Collaboration Initiative Seed Grant (Award Number # A-9046503915). 2017 to 2019.

*A Novel Pediatric Gait Rehabilitation Device.* Multi-Principal Investigator. NIH - NICHD (Federal Award Number: 1R21HD074820-01A1). 2013 to 2017.

*Development of a Pediatric Intelligently Controlled Assistive Rehabilitation Elliptical (Pedi-ICARE) Training System to Promote Walking and Fitness in Children with Physical Limitations.* Principal Investigator. ACL- NIDILRR- DHHS (Federal Award Number: 90IF0060) and formerly NIDRR - US Department of Education (Federal Award Number: H133G130274). 2013 to 2016.

*GARDE: Developing a World-Class Rehabilitation Engineering Workforce in America's Heartland.* Co-Principal Investigator. National Science Foundation CBET - Gen & Age Rel Disabilities Eng (Federal Award Number: 1159626). 2012 to 2017.

*First Hope Initiative.* Principal Investigator. Department of Health and Human Services, Health Resources and Services Administration (Federal Award Number: 1 R1CRH20680-01-00). 2010 to 2013.

*Randomized Trial of the Innovative Neurotronics WalkAide Compared to Conventional Ankle-Foot Orthosis (AFO) in Stroke Patients.* Investigator. Innovative Neurotronics, Inc (Clinical Trials.gov Identifier: NCT01087957). 2011 to 2013.

*Development of an Intelligently Controlled Assistive Rehabilitation Elliptical (ICARE) Training System to Promote Walking Function and Physical Fitness in Persons with Physical Limitations.* Principal Investigator. National Institute on Disability and Rehabilitation Research, U.S. Department of Education (Federal Award Number: H133G070209). 2007 to 2010.

*Mobile Technology for Independence.* Program Director. Daniels Fund. 2009 to 2010.

*Association of the Performing Arts Presenters Creative Campus Innovations Grant Program.* Co-Investigator. Doris Duke Charitable Foundation. 2007 to 2009.

*Robotic System for Automated Image Acquisition and Diagnosis of Tendon Injury.* Co-Investigator. Maude Hammond Fling Faculty Research Fellowship, University of Nebraska – Lincoln. 2008 to 2009.

*Comparison of Gait Kinematics and Muscle Activation during Overground Gait, Treadmill Walking, and Elliptical Training in Individuals with Multiple Sclerosis.* Site Principal Investigator. Health Future Foundation Faculty Development Grant, Creighton University. 2006 to 2008.

*ProActive in Action Health and Fitness Program.* Project Director. Daniels Fund. 2005 to 2007.

*Development of a Reliable Sonographic Method to Quantify Tendon and Ligament Structure in Select Symptomatic and Asymptomatic Tissues Exposed to Varying Activity Levels.* Co-Investigator. Layman Award, University of Nebraska – Lincoln. 2005 to 2007.

*Comprehensive Analysis of Walking Function while Wearing the Compact Prosthesis Compared to Alternative Modes of Ambulation: An Assessment of K-Level 2 Walkers.* Principal Investigator. Otto Bock Health Care. 2004 to 2008.

*Quantified Custom Inserts - Amputation Prevention Program for Diabetes Mellitus.* Project Manager. National Institute on Disability and Rehabilitation Research (Federal Award Number: H133G020002). 2002 to 2005.

*Coefficient of Friction Requirements during Ambulation: Influence of Disability and Task in Older Persons.* Principal Investigator. California Physical Therapy Fund (Grant Number 01-08). 2001 to 2002.

*Gait Mechanics of the Partial Foot Amputee.* Research Physical Therapist. Department of Veterans Affairs (Grant Number A861RA). 1996 to 1999.

*Effects of Electrical Stimulation on Prevention and Management of Ulcers in Individuals with Spinal Cord Injury and DM.* Research Assistant. National Institute on Disability and Rehabilitation Research (Grant Number H133A80040-90). 1990 to 1991.

## HONORS and AWARDS

- 2021 *inSpire 2021 Excellence in Healthcare Award.* Celebrating Women's Leadership. Lincoln Journal Star. Lincoln, NE. 2021.
- 2014 *The Innovation Award,* Madonna Rehabilitation Hospital. Lincoln, NE. 2014.
- 2013 *Distinguished Alumnus Award.* University of Southern California Division of Biokinesiology and Physical Therapy. Los Angeles, CA. 2013.
- 2013 *Winner, International daVinci Award, Recreation and Leisure* category for Madonna ICARE by Sports Art. Michigan Chapter of the National MS Society. Dearborn, MI. 2013.
- 2011 *Finalist, International daVinci Awards, Recreation and Leisure* category for development of the ICARE. Michigan Chapter of the National MS Society. Dearborn, MI. 2011.
- 2004 *Outstanding Teacher Award (presented to an adjunct faculty member "selected by students who demonstrates high intellectual standards, extremely effective teaching strategies, and genuine concern for students"),* Department of Biokinesiology and Physical Therapy, University of Southern California. 2004.
- 2003 *Gait and Clinical Movement Analysis Society's (GCMAS) Best Paper Award.* **Burnfield JM**, Tsai YJ, Powers C. Comparison of utilized coefficient of friction requirements in older persons with and without a disability to younger persons during different walking tasks. 2003.
- 2003 *Physical Therapist Student Research Award,* California Physical Therapy Association for study, "Influence of age and gender on utilized coefficient of friction while walking at different speeds." 2003.
- 2003 *Order of the Golden Cane Award (for outstanding accomplishments in academic course work, clinical practice, and scientific research),* Department of Biokinesiology and Physical Therapy, University of Southern California, Los Angeles, CA. 2003.
- 2002 *Jacquelin Perry Scholar,* Department of Biokinesiology and Physical Therapy, University of Southern California, Los Angeles, CA. 2002.

- 2002 *Award for Excellence in Teaching*, Department of Biokinesiology and Physical Therapy, University of Southern California, Los Angeles, CA. 2002.
- 2002 *First Place, American Society of Safety Engineers Foundation, 2001-2002 ASSEF/NIOSH Cash Award Competition.* **Burnfield JM**, Tsai YJ, Powers C. Influence of Age and Gender on Slip and Fall Risk: Implications for Environmental Interventions. 2002.
- 2002 *Second Place, American Society of Safety Engineers Foundation, 2001-2002 ASSEF/NIOSH Cash Award Competition.* **Burnfield JM**, Tsai YJ, Powers C. Influence of Task and Medical Conditions on Utilized Coefficient of Friction. 2002.
- 2002 *Honorable Mention, American Society of Safety Engineers Foundation, 2001-2002 ASSEF/NIOSH Cash Award Competition.* Tsai YJ, **Burnfield JM**, Powers C. 2002. Biomechanical Responses to Unexpected Slips During Walking in Young and Older Adults: Implications for Therapeutic Interventions.
- 2001 *Physical Therapist Student Research Award*, California Physical Therapy Association for study, "The influence of lower extremity joint torque on gait characteristics in elderly men." 2001.
- 2001 *Whitaker Foundation Student Travel Award*, Gait and Clinical Movement Analysis Society Annual Conference. 2001.
- 1999 - 2000 *Promotion of Doctoral Studies Award, Level I*, Foundation for Physical Therapy. 1999 to 2000.
- 1998 - 1999 *Promotion of Doctoral Studies Award, Level I*, Foundation for Physical Therapy. 1998 to 1999.
- 1993, 1990 *Excellence in Clinical Teaching Award*, Physical Therapy Department, Rancho Los Amigos National Rehabilitation Center, Downey, CA. 1990 and 1993.
- 1986 *Leadership Award*, School of Health Related Professions, Department of Physical Therapy, State University of New York, Buffalo, NY. 1986.

## PATENTS

1. **Burnfield JM**, Shu Y, Taylor AP, Buster TW, Nelson CA (August 30, 2011). Rehabilitation and Exercise Machine. U.S. Patent 8,007,405 B2.
2. **Burnfield JM**, Shu Y, Taylor AP, Buster TW, Nelson CA (May 15, 2012). Rehabilitation and Exercise Machine. U.S. Patent 8,177,688 B2.
3. **Burnfield JM**, Taylor AP, Buster TW, Nelson CA, Shu Y (August 19, 2014). Improved Rehabilitation and Exercise Machine. Canadian Patent 2,776,626.
4. Nelson CA, Stolle CJ, **Burnfield JM** (April 9, 2019). Biomechanical Foot Guidance Linkage. U.S. Patent 10,252,100 B1.
5. Nelson CA, Stolle CJ, **Burnfield JM**, Buster TW, McCrory BJ (July 7, 2020). Assistive Rehabilitation Elliptical System. U.S. Patent 10,702,735 B2.

## CE CERTIFICATION

1. Conformité Européenne (CE) Mark 674683 (August 28, 2020): ICARE – Intelligently Controlled Assistive Rehabilitation Elliptical (Class IIa, MD 1108).

## BOOK

Perry J, **Burnfield JM** (2010). *Gait Analysis, Normal and Pathological Function, 2<sup>nd</sup> Edition*. Slack: Thorofare, NJ.

## PUBLICATIONS (peer reviewed)

1. Fager SK, **Burnfield JM**, Sorenson T (2023). Participatory design approach to creating an accessible nurse-call/hospital room control system for individuals with severe physical impairments. *Assistive Technology Outcomes and Benefits*, 17(Spring):96-109.
2. Hao J, Buster TW, Cesar GM, **Burnfield JM** (2023). Virtual reality augments effectiveness of treadmill walking training in patients with walking and balance impairments: A systematic review and meta-analysis of randomized controlled trials. *Clinical Rehabilitation*, 37(5):603-619. DOI: 10.1177/02692155221138309.
3. Huang CK, Buster TW, Siu KC, **Burnfield JM** (2022). Combining a non-immersive virtual reality gaming with motor-assisted elliptical exercise increases engagement and physiologic effort in children. *Frontiers in Virtual Reality: Virtual Reality in Medicine*,3:1063187. DOI: 10.3389/frvir.2022.1063187.
4. Mohammadzadeh Gonabadi, A. Cesar G, Buster TW, **Burnfield JM** (2022). Effect of gap-filling technique and gap location on linear and nonlinear calculations of motion during locomotor activities. *Gait & Posture*, 94(2022):85-92. DOI: 10.1016/j.gaitpost.2022.02.025.
5. Cesar GM, Buster TW, Mohammadzadeh Gonabadi A, **Burnfield JM** (2022). Kinematic and muscle demand similarities between pediatric-modified motor-assisted elliptical training at fast speed and fast overground walking: Real-world implications for pediatric gait rehabilitation. *Journal of Electromyography and Kinesiology*, 63:102639. DOI: 10.1016/j.jelekin.2022.102639.
6. McCrory B, Ma J, Irons SL, **Burnfield JM** (2022). Occupational injuries and patient lift usage among physical rehabilitation therapists. *Journal of Back and Musculoskeletal Rehabilitation*, 35(1):195-205. DOI: 10.3233/BMR-200354. PMID: 34397400.
7. Cesar GM, Buster TW, **Burnfield JM** (2021). Test-Retest reliability and minimal detectable change of the computerized dynamic posturography PROPRIO for adults with chronic traumatic brain injury. *Disability and Rehabilitation*, 43(14):2038-2044. DOI: 10.1080/09638288.2019.1688872. PMID: 31724889.
8. **Burnfield JM**, Cesar GM, Buster TW (2021). Feasibility of motor-assisted elliptical to improve walking, fitness and balance following pediatric acquired brain injury: A case series. *Journal of Pediatric Rehabilitation Medicine: An Interdisciplinary Approach Throughout the Lifespan*, 14(3):539-551. DOI: 10.3233/PRM-200717. PMID: 33935119.
9. Fager SK, **Burnfield JM**, Pfeifer CM, Sorenson T (2021). Perceived importance of AAC messages to support communication in rehabilitation settings. *Disability and Rehabilitation: Assistive Technology*, 16(7):796-801. DOI: 10.1080/17483107.2020.1736652. PMID: 32141784.
10. Williams NA, Hatton-Bowers H, Kohel KL, Pillai S, **Burnfield JM** (2021). Informal caregivers' well-being at the transition to caregiving. *Rehabilitation Counseling Bulletin*, 64(4):208-221. DOI: 10.1177/0034355220962186.



11. **Burnfield JM**, Cesar GM, Buster TW (2020). Variations in plantar pressure variables across elliptical trainers in older adults. *Clinical Biomechanics*, 80(2020):105142. PMID: 32791378.
12. Cesar GM, Buster TW, **Burnfield JM** (2020). Comparison of plantar pressure profile of young adults during training on elliptical devices and overground walking: A pilot study. *The Foot*, 45:101716. DOI: 10.1016/j.foot.2020.101716. PMID: 33039905.
13. Fallahtafti F, Pfeifer CM, Buster TW, **Burnfield JM** (2020). Effect of motor-assisted elliptical training speed and body weight support on center of pressure movement variability. *Gait and Posture*, 81:138-143. DOI: 10.1016/j.gaitpost.2020.07.018. PMID: 32888552.
14. Cesar GM, Buster TW, **Burnfield JM** (2020). Cardiorespiratory fitness, balance and walking improvements in an adolescent with cerebral palsy (GMFCS II) and autism after motor-assisted elliptical training. *European Journal of Physiotherapy*, 22(3):124-132. DOI: 10.1080/21679169.2018.1536764.
15. Williams NA, **Burnfield JM**, Springer P, Wolf K, Buster TW (2019). Therapeutic massage to enhance family caregivers' well-being in a rehabilitation hospital. *Complementary Therapies in Clinical Practice*, 35:361-367. DOI: <https://doi.org/10.1016/j.ctcp.2019.03.020>.
16. Williams NA, **Burnfield JM** (2019). Psychological difficulties and parental well-being in children with musculoskeletal problems in the 2011/2012 National Survey of Children's Health. *Rehabilitation Psychology*, 64(1):87-97. DOI: 10.1037/rep0000251.
17. **Burnfield JM**, Buster TW, Pfeifer CM, Irons SL, Cesar GM, Nelson CA (2019). Adapted motor-assisted elliptical for rehabilitation of children with physical disabilities. *ASME Journal of Medical Devices*, 13(1):011006. DOI: 10.1115/1.4041588.
18. **Burnfield JM**, Pfeifer CM, Kwapiszeski S, Irons SL, Buster TW, Cesar GM (2019). Impact of ICARE training speed and motor assistance on cardiovascular response. *Cardiopulmonary Physical Therapy Journal*, 30(3):115-122. DOI: 10.1097/CPT.0000000000000098.
19. Pfeifer CM, Rowen D, Buster TW, Cesar GM, Irons SL, **Burnfield JM** (2019). Design and validation of a heart rate and speed monitoring device with the ICARE. *ASME Journal of Medical Devices*. 13(1):015002. DOI: 10.1115/1.4041337.
20. **Burnfield JM**, Cesar GM, Buster TW, Irons SL, Pfeifer CM (2018). Walking and fitness improvements in child with diplegic cerebral palsy following motor-assisted elliptical intervention. *Pediatric Physical Therapy*, 30(4):E1-E7. DOI: 10.1097/PEP.0000000000000541. PMID: 30277973.
21. Pfeifer CM, Gay TJ, Hawks JA, Farritor SM, **Burnfield JM** (2017). Investigation of toppling ball flight in American football with a mechanical field-goal kicker. *Sports Engineering*. 2017:1-8. DOI: <https://doi.org/10.1007/s12283-017-0254-x>.
22. **Burnfield JM**, Cesar G, Buster TW, Irons SL, Nelson CA (2017). Kinematic and muscle demand similarities between motor-assisted elliptical training and walking: Implications for pediatric gait rehabilitation. *Gait and Posture*, 51:194-200. DOI: 10.1016/j.gaitpost.2016.10.018. PMID: 27810692.
23. Cesar GM, Pfeifer CM, **Burnfield JM** (2017). 3-Dimensional versus 2-dimensional comparison of knee valgus collapse during vertical jump: Clinical implications for ACL risk of injury assessment. *Journal of Sports Medicine and Therapy*, 2(1):32-38.

24. Cesar GM, Edwards H, Hasenkamp R, **Burnfield JM** (2017). Prediction of athletic performance of male and female athletes measured by triple hop for distance. *Trends in Sport Sciences*, 1(24):19-25.
25. Cesar GM, Buster TW, **Burnfield JM** (2017). Should gait outcomes be the primary focus in pediatric gait rehabilitation? *Journal of Novel Physiotherapies*, 7(3):1000342. DOI: 10.4172/2165-7025.1000342.
26. Pfeifer CM, **Burnfield JM**, Cesar GM, Twedt MH, Hawks JA (2016). Video capture and post processing technique for approximating 3D projectile trajectory. *Sports Technology*, 8(3-4):124-129. DOI: 10.1080/19346182.2016.1248974.
27. Buster TW, Chernyavskiy P, Harms NR, Kaste G, **Burnfield JM** (2016). Computerized dynamic posturography detects balance deficits in individuals with a history of chronic severe traumatic brain injury. *Brain Injury*, 30(10):1249-1255. DOI: 10.1080/02699052.2016.1183822.
28. Cesar GM, Tomasevicz C, **Burnfield JM** (2016). Frontal plane comparison between drop jump and vertical jump: Implications for the assessment of ACL risk of injury. *Sports Biomechanics*. 15(4):440-449. DOI: 10.1080/14763141.2016.1174286.
29. Madrigal LA, Wilson PB, **Burnfield JM** (2016). Nutritional regrets and knowledge in National Collegiate Athletic Association Division I athletes: Establishing a foundation for educational interventions. *Journal of Issues in Intercollegiate Athletics*, 9:1-16.
30. **Burnfield JM**, Buster TW, Goldman AJ, Corbridge LM, Harper-Hanigan K (2016). Partial body weight support treadmill training speed influences paretic and non-paretic leg muscle activation, stride characteristics, and ratings of perceived exertion during acute stroke rehabilitation. *Human Movement Science*, 47:16-28. DOI: 10.1016/j.humov.2016.01.012. PMID: 26845732.
31. Wilson PB, Madrigal LA, **Burnfield JM** (2016). Weight control practices of Division I National Collegiate Athletic Association athletes. *The Physician and Sportsmedicine*, 44(2):170-176. DOI: 10.1080/00913847.2016.1149420.
32. Irons SL, Brusola GA, Buster TW, **Burnfield JM** (2015). Novel motor-assisted elliptical training intervention improves Six-Minute Walk Test and oxygen cost for an Individual with Progressive Supranuclear Palsy. *Cardiopulmonary Physical Therapy Journal*, 26(2): 36-41. DOI: 10.1097/CPT.000000000000007.
33. Nelson CA, Stolle CJ, **Burnfield JM**, Buster TW (2015). Modification of the Intelligently Controlled Assistive Rehabilitation Elliptical (ICARE) system for pediatric therapy. Published online, *ASME Journal of Medical Devices*, 9(4):6 pages. DOI: 10.1115/1.4030276.
34. Bethoux F, Rogers HL, Nolan KJ, Abrams GM, Annaswamy T, Brandstater M, Browne B, **Burnfield JM**, Feng W, Freed MJ, Geis C, Greenberg J, Gudesblatt M, Ikramuddin F, Jayaraman A, Kautz SA, Lutsep H, Madhavan S, Meilahn J, Pease WS, Rao N, Seetharama S, Sethi P, Turk MA, Wallis RA, Kufta C (2015). Long-term follow-up to a randomized controlled trial comparing peroneal nerve functional electrical stimulation to an ankle foot orthosis for patients with chronic stroke. *Neurorehabilitation and Neural Repair*, 29(10):911-922. DOI: 10.1177/1545968315570325. PMID: 25653225.
35. Fager SK, **Burnfield JM** (2015). Speech recognition for environmental control: Effect of microphone type, dysarthria and severity on recognition results. *Assistive Technology*, 27(4):199-207. DOI: 10.1080/10400435.2015.1024349.

36. Bethoux F, Rogers HL, Nolan KJ, Abrams GM, Annaswamy T, Brandstater M, Browne B, **Burnfield JM**, Feng W, Freed MJ, Geis C, Greenberg J, Gudesblatt M, Ikramuddin F, Jayaraman A, Kautz SA, Lutsep H, Madhavan S, Meilahn J, Pease WS, Rao N, Seetharama S, Sethi P, Turk MA, Wallis RA, Kufta C (2014). The effects of peroneal nerve functional electrical stimulation versus ankle-foot orthosis in patients with chronic stroke: a randomized controlled trial. *Neurorehabilitation and Neural Repair*, 28(7):688-697. DOI: 10.1177/1545968314521007. PMID: 24526708.
37. **Burnfield JM**, Irons SL, Buster TW, Taylor AP, Hildner GA, Shu Y (2014). Comparative analysis of speed's impact on muscle demands during partial body weight support motor-assisted elliptical training. *Gait and Posture*, 39(1):314-320. DOI: org/10.1016/j.gaitpost.2013.07.120. PMID: 23973354.
38. Fager SK, **Burnfield JM** (2014). Patients' experiences with technology during inpatient rehabilitation: opportunities to support independence and therapeutic engagement. *Disability and Rehabilitation: Assistive Technology*, 9(2):121-127. DOI: 10.3109/17483107.2013.787124.
39. McCrory B, Harlow AH, **Burnfield JM** (2014). Musculoskeletal risk to physical therapists during overground gait training: A case report. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 58(1):1219-1223. DOI: 10.1177/1541931214581254.
40. McCrory B, **Burnfield JM**, Darragh A, Meza JL, Irons SI, Brusola G, Link AM. (2014). Work injuries among therapists in physical rehabilitation. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 58(1):1072-1076. DOI: 10.1177/1541931214581224.
41. Nelson CA, **Burnfield JM**, Gu L (2014). Mobility-enhancing fall-prevention device for physical rehabilitation. *Journal of Medical Devices*, 8(2):020929. DOI: 10.1115/1.4027029 [Technical Brief].
42. Nelson CA, **Burnfield JM**, Gu L, Ems H, Ens Q (2014). Forearm attachment for post-amputation weight lifting exercise. *Journal of Medical Devices*, 8(2):020930. DOI: 10.1115/1.4027030 [Technical Brief].
43. Eberly VJ, Mulroy SJ, Gronley JK, Perry J, Yule WJ, **Burnfield JM** (2013). Impact of a stance phase microprocessor-controlled knee prosthesis on level walking in lower functioning individuals with a transfemoral amputation. *Prosthetics and Orthotics International*, 38(6):447-455. DOI: 10.1177/0309364613506912. PMID: 24135259.
44. Buster TW, **Burnfield JM**, Taylor AP, Stergiou, N (2013). Lower extremity kinematics during walking and elliptical training in individuals with and without traumatic brain injury. *Journal of Neurologic Physical Therapy*, 37(4):176-86. DOI: 10.1097/NPT.0000000000000022. PMID: 24189335.
45. **Burnfield JM**, McCrory B, Shu Y, Buster TW, Taylor AP, Goldman AJ (2013). Comparative kinematic and electromyographic assessment of clinician- and device-assisted sit-to-stand transfers in patients with stroke. *Physical Therapy*, 93(10):1331-1341. DOI: 10.2522/ptj.20120500. PMID: 23641027.
46. Bashford GR, **Burnfield JM**, Pérez LC (2013). Physical activity discrimination improvement using accelerometers and wireless sensor network localization. *Biomedical Sciences Instrumentation*, 49:243-250. PMID: 23686206.
47. **Burnfield JM**, Shu Y, Buster TW, Taylor A, McBride MM, Krause ME (2012). Kinematic and electromyographic analyses of normal and device-assisted sit-to-stand transfers. *Gait and Posture*, 36(3):516-522. PMID: 22727735.

48. **Burnfield JM**, Eberly V, Gronley JK, Perry J, Yule W, Mulroy SJ (2012). Impact of stance phase microprocessor-controlled knee prosthesis on ramp negotiation and community walking in K2 level transfemoral amputees. *Prosthetics and Orthotics International*, 36(1):95-104. DOI: 10.1177/0309364611431611. PMID: 22223685.
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117. **Burnfield JM**, Gronley J, Mulroy SJ, Perry J (2001). Muscular demands at the ankle of toe walking. *Gait and Posture*, 13(3):244.
118. **Burnfield JM**, Lim P, Flynn JE, Brault J, Powers CM (2001). Comparison of utilized coefficient of friction requirements between males and females during shod walking at different speeds. *Proceedings American Academy of Forensic Sciences*, 7:92-93.
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reproducibility of data obtained from two types of tribometers when measuring the slip resistance of walkway surfaces. *Proceedings American Academy of Forensic Sciences*, 7:94.

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123. **Burnfield JM**, Boyd LA, Mulroy SJ, Perry J (2000). The impact of transmetatarsal amputation on gait characteristics. *Issues on Ageing*, 23(1):26.
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129. Dorostkar M, Ayyappa E, Perry J, Chambers R, **Burnfield JM**, Boyd L, Bontrager E, Rao S, Mulroy S (1998). Gait mechanics of partial foot amputee. *Department of Veterans Affairs, Rehabilitation Research and Development Progress Reports 1997*, 35(July):17-18.
130. **Burnfield JM**, Boyd LB, Mulroy SJ, Perry J (1998). The effect of partial foot amputation on sound limb loading force. *National Meeting Rehabilitation Research and Development Service Proceedings*, 1998 (October), pg. 97.
131. Baker LL, Villar F, DeMuth S, **Burnfield JM**, Chambers RB (1991). The effect of electrical stimulation on healing rate in diabetic patients. *Proceedings of the RESNA 14<sup>th</sup> Annual Conference*, pgs. 388-390, Kansas City, MO.

## INVITED PROFESSIONAL PRESENTATIONS

1. Knight R, **Burnfield JM**. The intersection between COVID-19 and Brain Injury: Advancing Understanding and Rehabilitation Outcomes (keynote). *2023 Nebraska Brain Injury Conference*. March 23, 2023.



2. **Burnfield JM.** Origen del ICARE y sus diversos usos y demás aplicaciones en el Hospital de Investigación y de Rehabilitación Madonna. *Auditorio Mayor Universidad de Santander UDES.* September 15, 2022 (Virtual online presentation).
3. **Burnfield JM,** Boersma K, Peoples J, Manes MR, Osborne R. Virtual rehabilitation and COVID-19: A multi-site survey of patients' and providers' satisfaction with care during a pandemic. *Brooks Rehabilitation Research Connection Webinar Research Spotlight: Recent & Ongoing Projects with Aligned Partners.* March 8, 2022.
4. **Burnfield JM.** ICARE to Promote Rehabilitation in Community Environments. *Moving with H.O.P.E.* Shelton, CT. December 13, 2021.
5. **Burnfield JM.** ICARE Use in the Outpatient Setting. *Medical City Denton Health Corporation of America.* Denton, TX. November 30, 2021.
6. Sorenson T, Farlin T, Fager S, **Burnfield JM.** Promoting hospital room independence and communication for individuals with complex rehabilitation needs. *ARN's 2021 Annual Rehabilitation Nursing Conference.* Providence, RI and Virtual Online. November 10-12, 2021.
7. **Burnfield JM.** Underlying Neuroscientific and Exercise Science Principles Guiding Rehabilitation Therapy. *Moving with H.O.P.E.* Shelton, CT. November 8, 2021 (Virtual Online Presentation).
8. **Burnfield JM.** ICARE Rehabilitation to Promote Recovery of Function, Fitness and Balance. *Medical City Denton Health Corporation of America.* Denton, TX. November 5, 2021 (Virtual Online Presentation).
9. **Burnfield JM.** Underlying Neuroscientific and Exercise Science Principles Guiding Rehabilitation Therapy. *Medical City Denton Health Corporation of America.* Denton, TX. October 26, 2021 (Virtual Online Presentation).
10. Votto J, **Burnfield JM,** Makim A. Recovery After Transfer from Hospital to LTACH for COVID-19: The RAFT COVID-19 Study. *NALTH Fall 2021 Virtual Long Term Care Hospital Leadership Conference.* September 8, 2021.
11. **Burnfield JM.** ICARE for Rehabilitation. *Hospital De Rehabilitacion Del Instituto Guatemalteco (Rehabilitation Hospital of Guatemala).* Ciudad de Guatemala, Guatemala. August 13, 2021 (Virtual Online Presentation).
12. **Burnfield JM.** ICARE: A community-based approach for addressing gait, fitness, balance and upper extremity rehabilitation goals. *The Natalie Barnhard Center for Spinal Cord Injury and Recovery / Motion Project.* Cheektowaga, NY. June 18, 2021.
13. **Burnfield JM, Buster TW.** ICARE: A unified approach for addressing gait, fitness, balance and upper extremity rehabilitation aims. *Good Samaritan Hospital.* Kearney, NE. June 9, 2021.
14. **Burnfield JM.** Lunch and Learn: ICARE training to promote function, fitness and balance. *GoToWebinar: East Coast attendees.* November 11, 2020. *GoToWebinar: West Coast and South American attendees.* November 12, 2020.
15. **Burnfield JM.** Observational gait analysis: How knowledge of the fundamentals can enhance patient outcomes. *Clinical Doctorate in Physical Therapy Program, University of South Dakota.* Vermillion, SD. Presented November 2021; September, 2020; November, 2019; November, 2018; November, 2017; October, 2016; November, 2015; November, 2014; November, 2013; November, 2012; November, 2011; October, 2010; October, 2009; October, 2008; October, 2007; November, 2006 (one day course).

16. **Burnfield JM.** Translational PM&R research: Quantitative research design. *Physical Medicine and Rehabilitation Residency Program, University of Nebraska Medical Center.* Omaha, NE. Presented September 11, 2020 and September 6, 2019.
17. **Burnfield JM.** ICARE: An integrated approach for addressing gait, fitness, balance and upper extremity rehabilitation goals. *Ability KC.* Kansas City, MO. November 20, 2019.
18. **Burnfield JM.** Three Dimensional (3D) printing: Advantages of rapid prototyping to advance rehabilitation care and outcomes. *2019 Paradigm Summit.* Austin, TX. October 25, 2019.
19. **Burnfield JM.** Role of 3D printing in rehabilitation care and research. *2019 IRSG (Insurance Rehabilitation Synergy Group) Annual Conference.* St. Paul, MN. May 7, 2019.
20. **Burnfield JM.** Three Dimensional (3D) printing to advance rehabilitation care and outcomes. *Workers Compensation Summit.* Omaha, NE. April 18, 2019.
21. **Burnfield JM.** Gait overview: Joint motions, muscle demands and functional accomplishments. *2019 Madonna Locomotor Training Conference: Integrating Scientific Principles with Clinical Practice to Improve Function, Fitness, Health and Wellbeing for Individuals with Mobility Impairments.* Madonna Rehabilitation Hospitals. Lincoln, NE. April 5, 2019.
22. **Burnfield JM.** Impact of neurologic injuries and illnesses on gait, cardiorespiratory fitness, health and wellbeing. *2019 Madonna Locomotor Training Conference: Integrating Scientific Principles with Clinical Practice to Improve Function, Fitness, Health and Wellbeing for Individuals with Mobility Impairments.* Madonna Rehabilitation Hospitals. Lincoln, NE. April 5, 2019.
23. **Burnfield JM, Buster TW, Cesar GM, Irons SL.** Influence of training parameters on muscle and cardiorespiratory response: A hands-on biomechanical analysis. *2019 Madonna Locomotor Training Conference: Integrating Scientific Principles with Clinical Practice to Improve Function, Fitness, Health and Wellbeing for Individuals with Mobility Impairments.* Madonna Rehabilitation Hospitals. Lincoln, NE. April 5, 2019.
24. **Burnfield JM.** Locomotor approaches to gait and fitness recovery: Challenges and opportunities. *2019 Madonna Locomotor Training Conference: Integrating Scientific Principles with Clinical Practice to Improve Function, Fitness, Health and Wellbeing for Individuals with Mobility Impairments.* Madonna Rehabilitation Hospitals. Lincoln, NE. April 5, 2019.
25. **Burnfield JM.** ICARE: An integrated approach for addressing gait, cardiorespiratory, balance and upper extremity rehabilitation goals. *Rancho Los Amigos National Rehabilitation Center.* Downey, CA. November 26, 2018.
26. **Burnfield JM.** SportsArt ICARE motor-assisted elliptical training to improve walking, fitness, and wellbeing. *International Council on Active Aging (ICAA) Product Webinar.* November 6, 2018.
27. **Burnfield JM.** Invited Keynote: Foot and ankle rockers: Contributions to progression, shock absorption and stability during gait. *2018 Nederlandse Vereniging van Podotherapeuten Conference.* Congrescentrum NBC in Nieuwegein, Netherlands. September 21, 2018.
28. **Burnfield JM.** Progressive debilitating flat foot deformity: Diagnosis and management. *2018 Nederlandse Vereniging van Podotherapeuten Conference.* Congrescentrum NBC in Nieuwegein, Netherlands. September 21, 2018.

29. **Burnfield JM.** ICARE clinical use for walking, fitness, balance and arm rehabilitation: An integrated and affordable approach. *ExercisABILITIES Physical Therapy and Medical Fitness*. Rochester, MN. August 16, 2018.
30. **Burnfield JM.** ICARE: Customizing use for First Rehabilitation Hospital of Shanghai, China. *The First Rehabilitation Hospital of Shanghai, China*. April 21, 2018.
31. **Burnfield JM.** Robotic ICARE technology for walking, fitness, balance and arm rehabilitation: An integrated and affordable approach. *The 4<sup>th</sup> China Rehabilitation Forum (CRF2018)*. Shanghai, China. April 20, 2018.
32. **Burnfield JM.** ICARE: A practical rehabilitation solution to address complex patient challenges. *Osceola Regional Medical Center - HCA*. Kissimmee, FL. January 24, 2018.
33. **Burnfield JM.** Improving walking and fitness following neurologic injury: Practical solutions to complex challenges. *2018年中美康复医学与研究论坛 / 2018 Sino-US Rehabilitation Medicine and Research Symposium*. Shanghai, China. January 15, 2018.
34. **Burnfield JM.** ICARE: Integrated management of walking and fitness deficits across the rehabilitation continuum. *Penn State Hershey Rehabilitation Hospital - Select Medical*. Hershey, PA. November 10, 2016.
35. **Burnfield JM.** ICARE: Promoting walking and fitness gains across the rehabilitation continuum. *HealthSouth Rehabilitation Hospital of Middletown*. Middletown, DE. November 11, 2016.
36. **Burnfield JM, Terryberry-Spohr L, Tran J.** Affordable motor-assisted elliptical training to improve physical, cognitive, psychosocial and health outcomes across rehabilitation continuum. *Symposium 2016 American Congress of Rehabilitation Medicine (ACRM) 93<sup>rd</sup> Annual Conference: Progress in Rehabilitation Research*. Chicago, IL. November 2, 2016.
37. **Burnfield JM, Fager SK.** Translational research to advance rehabilitation care and outcomes for individuals with physical disabilities and chronic conditions. *Workers Comp Summit -- Madonna Rehabilitation Hospital*. Lincoln, NE. April 21, 2016.
38. **Burnfield JM.** Physical rehabilitation and engineering: A mission-driven collaboration. *Electrical and Computer Engineering, University of Nebraska – Lincoln*. October 16, 2015.
39. **Burnfield JM.** ICARE: A tool for comprehensive and intensive gait and cardiovascular training. *Casa Colina Hospital and Centers for Healthcare*. Pomona, CA. September 18, 2015.
40. **Burnfield JM.** Development and implementation of the ICARE for use in rehabilitation and fitness. *TIRR Memorial Hermann Rehabilitation and Research Center*. Houston, TX. May 11, 2015.
41. Goldman AJ, **Burnfield JM.** Stroke rehabilitation: Is it time to expand the stroke recovery window? *Nebraska Stroke Symposium*. Lincoln, NE. April 10, 2015.
42. **Burnfield JM.** Nebraska Athletic Performance Lab, UNL & Research Institute, Madonna Rehabilitation Hospital. *DOD Joint Biomechanical Modeling and Simulation Workshop*. Arlington, VA. August 28-29, 2014.
43. **Burnfield JM.** Health and Wellness Programming. *2014 Neurologic Physical Therapy Professional Education Consortium. University of Southern California Webinar Series*. December, 2014; December, 2013; December, 2012.

44. McCrory B, **Burnfield JM**, Meza JL, Darragh AR, Irons SL. The impact of patient lifts on work injuries among physical rehabilitation therapists in Nebraska. *Public Health Association of Nebraska 2014 Annual Conference*. Grand Island, NE. October 8-9, 2014.
45. **Burnfield JM**. Wellness research across the life span and healthcare continuum. *Wellness Advocate Program, University Health Center, Health Promotion and Outreach, University of Nebraska – Lincoln*. Lincoln, NE. November 13, 2013.
46. **Burnfield JM**. Normal and pathological gait: Fundamental concepts to improve patient outcomes. *Southeast Community College, Physical Therapist Assistant Program*. Lincoln, NE. October 22, 2013.
47. **Burnfield JM**. Development and implementation of the ICARE for use in rehabilitation and fitness. *Hospital Corporation of America*. Nashville, TN. October 14, 2013.
48. **Burnfield JM**. Desarrollo e implementación del ICARE para uso en rehabilitación y entrenamiento físico. *Instituto Nacional De Rehabilitación*. Lima, Perú. September 12, 2013.
49. **Burnfield JM**. Desarrollo e implementación del ICARE para uso en rehabilitación y entrenamiento físico. *TechnoSalud*. Lima, Peru. September 11, 2013.
50. **Burnfield JM**. Patient centered technology for physical rehabilitation: Engaging physical therapists to guide development (Invited Branch Lecturer for 2013). Duke University School of Medicine, *Department of Community and Family Medicine, Doctor of Physical Therapy Division*. Durham, NC. May 6, 2013.
51. **Burnfield JM**. Transcranial Doppler (TCD) opportunities for collaborative research and development within physical rehabilitation. *Department of Biological Systems Engineering, University of Nebraska Lincoln*. Lincoln, NE. April 15, 2013.
52. **Burnfield JM**. ICARE training to improve walking and cardiovascular fitness for individuals living with physical disabilities and chronic conditions. *Quality Living Incorporated*. Omaha, NE. April 10, 2013.
53. **Burnfield JM**. Emerging technologies for physical rehabilitation across the continuum of care: Engaging the PT community to guide development. *Eastern District of the Nebraska Physical Therapy Association*. Lincoln, NE. November 29, 2012.
54. **Burnfield JM**. ICARE training to improve walking and cardiovascular fitness for individuals living with physical disabilities and chronic conditions. *Marionjoy Rehabilitation Hospital*. Wheaton, IL. April 24-25, 2012.
55. **Burnfield JM**. ICARE training to improve walking and cardiovascular fitness for individuals living with physical disabilities and chronic conditions. *Hospital for Special Care*. New Britain, CT. April 2-3, 2012.
56. **Burnfield JM**. Partial body weight supported treadmill training: Biomechanical risks and rewards. *Twelfth Annual Safe Patient Handling and Movement Conference*. Orlando, FL. March 31, 2012.
57. **Burnfield JM**. ICARE training to improve walking and cardiovascular fitness for individuals living with physical disabilities and chronic conditions. *JFK Johnson Rehabilitation Institute*. Edison, NJ. March 26-27, 2012.
58. Billinger S, **Burnfield JM**, Scheets P. Action potential: How and why to get involved with the Neurology Section! *Combined Sections Meeting of the American Physical Therapy Association*. Chicago, IL. February 10, 2012.

59. **Burnfield JM.** Observational gait analysis – Enhancing patient outcomes by focusing on the fundamentals. *Clinical Doctorate in Physical Therapy Program, Creighton University.* Omaha, NE. June, 2011; June, 2010; June, 2009; June, 2008; June, 2007 (two half-day seminars per year).
60. **Burnfield JM.** Developing affordable adaptations to increase access, safety and use of exercise equipment for individuals with physical disabilities and chronic conditions (1.5 hour short course). *Rehabilitation Engineering and Assistive Technology Society of North America's 2011 Annual Conference.* Toronto, Ontario, Canada. June 6, 2011.
61. **Burnfield JM,** Nordness A, Murtagh B. Rehabilitation of non-accidental traumatic brain injury in children. *Treatment and Rehabilitation of the Pediatric Trauma Patient, Fifth Annual Trauma Conference.* Omaha, NE. May 6, 2011.
62. **Burnfield JM.** Therapeutic management of gait dysfunction: Integrating observation, clinical evaluation, and biomechanical research to guide evidence-based practice [1 day workshop]. *Sponsored by School of Physical Therapy, University of the Incarnate Word, Central District, Texas Physical Therapy Association, and the Military Performance Lab, Center for the Intrepid – DOR – BAMC.* San Antonio, TX. April 16, 2011.
63. **Burnfield JM.** Enhancing walking and cardiovascular fitness following a brain injury: Evidenced-based approaches for use in the rehabilitation setting and community. *2011 Brain Injury Association of Kansas and Greater KC's Beyond Rehab: Succeeding at Life – A Conference of Brain Injury.* Overland Park, KS. March 31, 2011.
64. **Burnfield JM.** Partial body weight supported treadmill training: Biomechanical risks and rewards. *Eleventh Annual Safe Patient Handling and Movement Conference.* Lake Buena Vista, FL. March 30, 2011.
65. **Burnfield JM.** Therapeutic management of gait dysfunction: Integrating observation, clinical evaluation, and biomechanical research to guide evidence-based practice [2 day workshop]. *Husson University, Department of Physical Therapy and Maine Coast Memorial Hospital.* Bangor, Maine. March 19-20, 2011.
66. **Burnfield JM,** Salisbury M, Spellman C, Buster TW. Promoting optimal walking and community engagement in those living with multiple sclerosis. *Nebraska TREND Symposium 2011.* Lincoln, NE. March 12, 2011.
67. **Burnfield JM.** Rehabilitation of gait dysfunction: Integrating observation, clinical evaluation, and biomechanical research to guide evidence-based practice [1 day workshop]. *Wisconsin's West Central District Physical Therapy Association.* LaCrosse, WS. February 18, 2011.
68. **Burnfield JM.** Promoting safe and effective exercise, walking and transfer opportunities in individuals with limited mobility. *Physical Therapy Program, University of Wisconsin.* La Crosse, WS. February 17, 2011.
69. **Burnfield JM.** Therapeutic management of neurologic gait dysfunction: Integrating observation, clinical evaluation, and biomechanical research to guide evidence-based practice [workshop]. *2011 Combined Sections Meeting of the American Physical Therapy Association, Neurology Section.* New Orleans, LA. February 8-9, 2011.
70. **Burnfield JM.** Gait analysis: From research to reality, the enduring legacy of Dr. Jacquelin Perry. *2011 Hanger Education Fair.* Reno, NV. February 4, 2011.
71. **Burnfield JM,** Perry J. Enhancing rehabilitation outcomes of individuals with an orthosis: Applying observational gait analysis. *Orthotics Specialists, Inc.* Phoenix AZ. November 5-

6, 2010.

72. **Burnfield JM.** ICARE: An affordable technology designed to promote walking and cardiovascular fitness during rehabilitation and following discharge. *8<sup>th</sup> Annual Medical Rehabilitation Providers Association Educational Conference*. New Orleans, LA. October 14, 2010.
73. **Burnfield JM.** Developing ICARE, an Intelligently Controlled Assistive Rehabilitation Elliptical training system to help individuals with physical disabilities and chronic conditions improve walking and cardiovascular fitness. *Entrepreneurial Management, College of Business Administration, University of Nebraska-Lincoln*. Lincoln, NE. September 16, 2010.
74. **Burnfield JM.** Development of the ICARE trainer to promote gait and cardiovascular fitness in individuals with physical disabilities. *Rancho Los Amigos National Rehabilitation Center*. Downey, CA. May 27, 2010.
75. **Burnfield JM.** Patient-Centered Rehabilitation Research. *Capital City Kiwanis*. Lincoln, NE. May 18, 2010.
76. **Burnfield JM.** Rehabilitation of persons with lower extremity amputations: An emphasis on optimizing walking function. *VIII<sup>ème</sup> Journée Scientifique des Infirmières. Grace Children's Hospital and International Child Care*. Port-au-Prince, Haiti. April 27, 2010.
77. **Burnfield JM.** Ergonomics in health care: Biomechanical considerations. *Wisconsin Physical Therapy Association*. Green Bay, WI. April 15, 2010.
78. **Burnfield JM.** Biomechanical demands of transfer and gait activities: Promoting clinician safety and therapeutic patient outcomes. *Tenth Annual Safe Patient Handling and Movement Conference*. Lake Buena Vista, FL. March 31, 2010.
79. **Burnfield JM, Combs S, Finley M (2010).** Integrating biomechanics to guide management of upper and lower extremity dysfunction: Emerging interventions for individuals with neurological involvement [2 hour short course]. *2010 Annual Combined Sections Meeting of the American Physical Therapy Association*. San Diego, CA. February 18, 2010 (2 hour short course).
80. **Burnfield JM, Goldman A.** The Physical Therapist's role in community based wellness for stroke patients. *Eighth Annual Nebraska Stroke Symposium – Present Challenges and Future Hopes*. Omaha, NE. October 12, 2009.
81. **Burnfield JM, Wilkinson H.** Breaking down barriers to wellness and fitness in persons living with chronic conditions and disabilities: A proactive approach. *Osher Lifelong Learning Institute (OLLI), College of Education and Human Sciences, University of Nebraska – Lincoln*. Lincoln, NE. April 15, 2009.
82. **Burnfield JM, Buster TW.** Neuroplasticity: Applying guiding principles to help people relearn to walk following an injury. *Osher Lifelong Learning Institute (OLLI), College of Education and Human Sciences, University of Nebraska – Lincoln*. Lincoln, NE. April 8, 2009.
83. **Burnfield JM.** Applied Observational gait analysis: A systematic, evidence based approach to enhance patient outcomes. *Kansas American Physical Therapy Association's Annual Meeting*. Wichita, KS. April 3-4, 2009.
84. **Burnfield JM.** Device assisted sit-to-stand movements: A comparison of joint motions and muscle demands to traditional movements. *Ninth Annual Safe Patient Handling and Movement Conference*. Lake Buena Vista, FL. April 1, 2009.

85. **Burnfield JM.** Management of the diabetic foot. *Clinical Doctorate in Physical Therapy Program, University of Nebraska Medical Center.* Omaha, NE. April, 2009; April, 2008; April, 2007; May, 2006.
86. **Burnfield JM, Culver L** (2008). Promoting physical fitness from acute care to the community: When just walking isn't an option [3 hour course]. *American Physical Therapy Association's 2008 Annual Conference and Exposition.* San Antonio, TX. June, 2008.
87. **Burnfield JM, Goulet C.** Updated Guidelines for the Georges Blanton Research Grant – Basic strategies for designing a strong clinical study. *Nebraska Physical Therapy Association Annual Meeting.* Lincoln, NE. October, 2007.
88. **Burnfield JM.** Observational gait analysis: A systematic, evidence-based approach. *Creighton University.* Omaha, NE. July, 2007 (one day course for clinicians from across the United States).
89. **Burnfield JM, Götz, K.** Gait Analysis: Applications for guiding clinical case study development. *Evangelischen Krankenhaus, Düsseldorf, Germany.* May 11-13, 2007.
90. **Burnfield JM.** Increased diabetic risk for individuals with disabilities – A need for adaptations and monitoring. *CDC's 30<sup>th</sup> Diabetes Translation Conference.* Atlanta, GA. April, 2007.
91. **Burnfield JM.** Dysphagia management. *Clinical Doctorate in Physical Therapy Program, Creighton University.* Omaha, NE. March, 2007; March, 2006.
92. **Burnfield JM.** Rehabilitation of persons with lower extremity amputations: An emphasis of optimizing walking function. *Menorah Medical Center.* Kansas City, MO. October, 2006 (one day course).
93. **Burnfield JM.** Gait Analysis: Normal and pathologic function. *Otto Bock, Inc.* Salt Lake City, UT. March, 2006.
94. **Burnfield JM.** Observational gait analysis: Refining knowledge and skills to enhance patient outcomes. *Nebraska Chapter of the American Physical Therapy Association Annual Meeting.* Lincoln, NE. September, 2005 (one day course).
95. **Burnfield JM.** Gait analysis: Integrating observation and clinical evaluation to enhance treatment effectiveness. *Madonna Rehabilitation Hospital.* Lincoln, NE. August, 2005 (two day course).
96. **Burnfield JM.** Management of the Diabetic Foot. *Clinical Doctorate in Physical Therapy Program, University of Nebraska Medical Center.* Omaha, NE. May, 2005.
97. **Burnfield JM, Perry J.** Applied observational gait analysis: Enhancing rehabilitation outcomes of persons with an orthosis or prosthesis. *Havasu Orthotics and Prosthetics.* Lake Havasu City, AZ. March, 2005 (one day course).
98. **Burnfield JM.** Clinical research: Fall prevention interventions for the older adult. *Institute for Rehabilitation and Science Engineering, Madonna Rehabilitation Hospital.* Lincoln, NE. February, 2004.
99. **Burnfield JM.** Human and environmental factors contributing to slips during walking. *Creighton University, Department of Physical Therapy.* Omaha, NE. November, 2003.
100. **Burnfield JM.** Factors influencing utilized coefficient of friction during gait. *American Society of Testing and Materials International Committee F13 (Pedestrian / Walkway Safety and Footwear) Symposium on Human Ambulation Factors in Slip and Fall Events.* Pasadena, CA. June, 2003.

101. **Burnfield JM.** Predicting utilized coefficient of friction during gait: Is it possible? *American Society of Testing and Materials International Committee F13 (Pedestrian / Walkway Safety and Footwear) Symposium on Human Ambulation Factors in Slip and Fall Events.* Pasadena, CA. June, 2003.
102. **Burnfield JM.** Relationship between utilized and available coefficient of friction in predicting slip events during gait. *American Society of Testing and Materials International Committee F13 (Pedestrian / Walkway Safety and Footwear) Symposium on Human Ambulation Factors in Slip and Fall Events.* Pasadena, CA. June, 2003.
103. **Burnfield JM, Götz, K.** Gait analysis using the Rancho Observational Gait Analysis System (Ganganalyse nach Rancho Aufbaukurs Ganganalyse). Evangelischen Krankenhaus. Düsseldorf, Germany. October, 2002 (two day course).
104. **Burnfield JM.** Neurologic gait analysis. *Casa Colina Rehabilitation Facility.* Pomona, California. September, 2002 (two day course).
105. **Burnfield JM.** Observational gait analysis: The Rancho Method. *Board of the Canadian Physiotherapy Association – Manitoba Branch.* Winnipeg, Manitoba, Canada. May, 2002 (two day course).
106. **Burnfield JM.** Slip events during walking: Biomechanical considerations. *School of Medical Rehabilitation, University of Manitoba.* Winnipeg, Manitoba, Canada. May, 2002
107. **Burnfield JM.** Biomechanical factors associated with slips and falls in gait. *Board of the Association of Rehabilitation Medicine of Manitoba.* Winnipeg, Manitoba, Canada. May, 2002.
108. **Burnfield JM.** Gait assessment in the elderly. *Falls Prevention and Management in Older Persons Conference, sponsored by the Geriatric Research Education and Clinical Center.* Marina Del Rey, CA. September, 2000.
109. **Burnfield JM, Sigward S, Ward S.** Observational gait analysis and pathological gait mechanisms. *University of Southern California.* Los Angeles, CA. August, 2000 (one day course).
110. **Burnfield JM, Ganley K.** Neurologic gait. *High Altitude Course, Northern Arizona University.* Flagstaff, AZ. August, 1999 (two day course).
111. **Burnfield JM, Boyd LA.** Advanced neurologic gait. *Oakland University, School of Health Sciences, Program in Physical Therapy.* Rochester, Michigan. October, 1998 (two day course).
112. **Burnfield JM.** Rehabilitation of individuals with a lower extremity amputation. *Master of Physical Therapy Program, Chapman College.* Orange, California. July, 1998.
113. **Burnfield JM, Boyd LA.** Advanced neurologic gait seminar. *Northern Arizona University, Physical Therapy Department.* Flagstaff, Arizona. June, 1998.
114. **Burnfield JM.** Observational gait analysis for the Physical Therapist. *Oakland University, School of Health Sciences, Program in Physical Therapy.* Rochester, Michigan. March, 1997 (two day course).
115. **Burnfield JM.** Observational gait analysis for the Physical Therapist Assistant. *Oakland University, School of Health Sciences, Program in Physical Therapy.* Rochester, Michigan. March, 1997 (two day course).
116. **Burnfield JM, Boyd LA.** New frontiers in the management of dysphagia: The Physical Therapy role. *Physical Therapy 1996: American Physical Therapy Association Scientific*



- Meeting and Exposition.* Minneapolis, Minnesota. June, 1996 (1/2 day course).
117. **Burnfield JM.** Observational gait analysis workshop. *Oakland University.* Rochester, Michigan. March, 1996 (two day course).
  118. **Burnfield JM,** Tierney L. Observational gait analysis workshop. *Mary Free Bed Hospital.* Grand Rapids, Michigan. February, 1996 (two day course).
  119. **Burnfield JM.** Prosthetic rehabilitation management. *Master of Physical Therapy Program, Chapman College.* Orange, CA. July, 1995.
  120. **Burnfield JM.** Function in Normal and Pathological Gait. *Master of Occupational Therapy Program, University of Southern California.* Los Angeles, CA. 1995; 1993; 1992.
  121. **Burnfield JM.** Normal observational gait analysis. *Gait Analysis Post-Conference Workshop at the 12<sup>th</sup> International Congress of the World Confederation for Physical Therapy.* Long Beach, CA. July, 1995.
  122. Lewthwaite R, **Burnfield JM.** Cognitive psychological perspectives for education and training. *Department of Health Services, Training and Organization Development Network.* Downey, CA. May, 1995.
  123. **Burnfield JM,** Orozco J, Esparza M. The impacts of cultural diversity on the practice and profession of Physical Therapy. *Master of Physical Therapy Program, Mount St. Mary's College.* Los Angeles, CA. May, 1995.
  124. Lewthwaite R, **Burnfield JM.** Clinical education impacts: Findings and implications. *Physical Therapy Clinical Education National Conference.* Buffalo, NY. April, 1995.
  125. **Burnfield JM.** Pathological gait: Pre-conference observational gait analysis workshop. *Alaska State American Physical Therapy Association Meeting.* Anchorage, Alaska. September, 1994.
  126. **Burnfield JM.** Observational gait analysis workshop. *Rancho Los Amigos Medical Center.* Downey, CA. September 1994.
  127. Lewthwaite R, Blaskey JW, **Burnfield JM,** Chiu ML, Diaz DS, Miller L. Reorienting Physical Therapy competence assessment: The development of the Clinical Competence Scale. *American Physical Therapy Association/Canadian Physiotherapy Association Joint Congress.* Toronto, Ontario, Canada. June, 1994.
  128. **Burnfield JM.** Clinical instructor training: Promoting professional development in the clinical setting. *University Hospital Physical Therapy Department, University of Southern California.* Los Angeles, CA. May, 1994.
  129. **Burnfield JM.** Normal and pathological gait for the PTA. *Physical Therapist Assistant Program, Mount St. Mary's College.* Los Angeles, CA. December, 1993.
  130. **Burnfield JM.** Introduction to gait for the PTA workshop. *Rancho Los Amigos Medical Center.* Downey, CA. September, 1993.
  131. **Burnfield JM.** Preparing for the student / From classroom to clinic: Road to independence. *Fifth National Physical Therapy Clinical Education Conference, Interscholastic Academic Clinical Coordinators Council of Southern California (IACCC).* Manhattan Beach, CA. April, 1993.
  132. **Burnfield JM.** Amputee gait. *Physical Therapy Department, Children's Hospital/Chapman University.* Los Angeles, CA. July 1992; May 1991.
  133. **Burnfield JM.** Prosthetics and orthotics. *Veterans Administration Medical Center.* Los

Angeles, CA. January - February 1991.

134. **Burnfield JM.** Diabetes mellitus. *Master of Physical Therapy Program, University of Southern California.* Los Angeles, CA. February, 1990.
135. **Burnfield JM.** Rehabilitation of the lower extremity amputee. *Master of Physical Therapy Program, University of Southern California.* Los Angeles, CA. March, 1990; February, 1989; April, 1988.

## **EDUCATIONAL MATERIALS DEVELOPED or REVISED**

Pathokinesiology Service and Physical Therapy Department. *Observational Gait Analysis Handbook.* (2001) Los Amigos Research and Education Institute, Inc. (Responsible for 2001 Revision)

**Burnfield JM,** Blaskey JW (co-producers). *Observational Gait Analysis: Data Collection.* Video Production. Education and Media Services. Rancho Los Amigos Medical Center. Downey, CA. October, 1995.

**Burnfield JM.** *Dysphagia Analysis.* Video Production. Education and Media Services. Rancho Los Amigos Medical Center. Downey, CA. October, 1995.

## **PUBLICATIONS (non-peer reviewed)**

1. **Burnfield JM.** Goldman AJ (2013). Stepping It Up. *Rehab Management*, 26(8): 10-17.
2. **Burnfield JM,** Thompson L, Lewthwaite R (1995). Patient education in physical therapy: Recognizing value and enhancing effectiveness. *Infusions: Research into Practice*, 2(1). Center for Research in Clinical Biokinesiology, Rancho Los Amigos Medical Center.
3. Pohl P, **Burnfield JM** (1989). Diabetes Mellitus. *Professional Staff Association of Rancho Los Amigos Medical Center.* Downey, CA.