DUKE UNIVERSITY MEDICAL CENTER CURRICULUM VITAE

for the Permanent Record and the

Appointments, Promotions and Tenure Committee

Date CV prepared: December 6, 2024

Name: Trevor A. Lentz, PT, PhD, MPH

Primary academic rank: Assistant Professor in Orthopaedic Surgery

Primary academic department: Orthopaedic Surgery

Secondary academic rank: Assistant Professor in Population Health Sciences

Secondary academic department: Population Health Sciences

OTHER TITLES:

Member in the Duke Clinical Research Institute Core Faculty Member, Duke-Margolis Institute for Health Policy

SPECIALTY CERTIFICATIONS AND DATES

ABPTS Sports Certified Specialist, 2012-2022

EDUCATION

Diploma, Jesuit High School, Tampa, Florida, 1999

B.S. in Exercise Science, University of Florida, Gainesville, FL, 2003

Master of Physical Therapy, University of Florida, Gainesville, FL, 2006

Master of Public Health, Health Policy and Management, University of Florida, Gainesville, FL, 2016

Ph.D. in Rehabilitation Science, University of Florida, Gainesville, FL, 2017

PROFESSIONAL TRAINING AND ACADEMIC CAREER

UF Health Orthopaedics and Sports Medicine Institute, Sports Physical Therapy Resident, 2006-2007

UF Health, Staff Physical Therapist, 2007-2013

UF Health, Staff Physical Therapist (PRN), 2013-2017

Brooks Rehabilitation, Public Health Intern, 2016

Duke Clinical Research Institute, Postdoctoral fellow, 2017-2019

Duke University, Assistant Professor in Orthopaedic Surgery, 2019 - present

Duke University, Member in the Duke Clinical Research Institute, 2019 – present

Duke University, Core Faculty Member, Duke-Margolis Institute for Health Policy, 2019 - present

Duke University, Assistant Professor in Population Health Sciences, 2024 - present

SCHOLARSHIP

A. Publications in refereed journals

- 1. Chmielewski TL, Jones D, Day T, Tillman SM, Lentz TA, George SZ. The association of pain and fear of movement/reinjury with function during anterior cruciate ligament reconstruction rehabilitation. J Orthop Sports Phys Ther. 2008 Dec;38(12):746–753. doi:10.2519/jospt.2008.2887. PMID: 19047767.
- Lentz TA, Tillman SM, Indelicato PA, Moser MW, George SZ, Chmielewski TL. Factors associated with function after anterior cruciate ligament reconstruction. Sports Health. 2009 Jan;1(1):47–53. doi:10.1177/1941738108326700. PMID: 23015854. PMCID: PMC3445122.

- 3. **Lentz** TA, Barabas JA, Day T, Bishop MD, George SZ. The relationship of pain intensity, physical impairment, and pain-related fear to function in patients with shoulder pathology. J Orthop Sports Phys Ther. 2009 Apr;39(4):270–277. doi:10.2519/jospt.2009.2879. PMID: 19346624.
- 4. **Lentz** TA, Sutton Z, Greenberg S, Bishop MD. Pain-related fear contributes to self-reported disability in patients with foot and ankle pathology. Arch Phys Med Rehabil. 2010 Apr;91(4):557–561. doi:10.1016/j.apmr.2009.12.010. PMID: 20382287.
- 5. Matheson H, **Lentz** TA. Tibial spine avulsion fracture. J Orthop Sports Phys Ther. 2010 Sep;40(9):595. doi:10.2519/jospt.2010.0414. PMID: 20805629.
- Chmielewski TL, Zeppieri G, Lentz TA, Tillman SM, Moser MW, Indelicato PA, George SZ. Longitudinal changes in psychosocial factors and their association with knee pain and function after anterior cruciate ligament reconstruction. Phys Ther. 2011 Sep;91(9):1355–1366. doi:10.2522/ptj.20100277. PMID: 21700761. PMCID: PMC3169786.
- 7. George SZ, Lentz TA, Zeppieri G, Lee D, Chmielewski TL. Analysis of shortened versions of the tampa scale for kinesiophobia and pain catastrophizing scale for patients after anterior cruciate ligament reconstruction. Clin J Pain. 2012 Jan;28(1):73–80. doi:10.1097/AJP.0b013e31822363f4. PMID: 21677565. PMCID: PMC3703641.
- 8. Zeppieri G, Lentz TA, Atchison JW, Indelicato PA, Moser MW, Vincent KR, George SZ. Preliminary results of patient-defined success criteria for individuals with musculoskeletal pain in outpatient physical therapy settings. Arch Phys Med Rehabil. 2012 Mar;93(3):434–440. doi:10.1016/j.apmr.2011.10.007. PMID: 22277243.
- 9. **Lentz** TA, Zeppieri G, Tillman SM, Indelicato PA, Moser MW, George SZ, Chmielewski TL. Return to preinjury sports participation following anterior cruciate ligament reconstruction: contributions of demographic, knee impairment, and self-report measures. J Orthop Sports Phys Ther. 2012 Nov;42(11):893–901. doi:10.2519/jospt.2012.4077. PMID: 22951437. PMCID: PMC3680881.
- 10. Chmielewski TL, Martin C, **Lentz** TA, Tillman SM, Moser MW, Farmer KW, Jaric S. Normalization considerations for using the unilateral seated shot put test in rehabilitation. J Orthop Sports Phys Ther. 2014 Jul;44(7):518–524. doi:10.2519/jospt.2014.5004. PMID: 24816499.
- Lentz TA, Zeppieri G, George SZ, Tillman SM, Moser MW, Farmer KW, Chmielewski TL. Comparison of physical impairment, functional, and psychosocial measures based on fear of reinjury/lack of confidence and return-to-sport status after ACL reconstruction. Am J Sports Med. 2015 Feb;43(2):345–353. doi:10.1177/0363546514559707. PMID: 25480833.
- 12. George SZ, Beneciuk JM, Bialosky JE, **Lentz** TA, Zeppieri G, Pei Q, Wu SS. Development of a Review-of-Systems Screening Tool for Orthopaedic Physical Therapists: Results From the Optimal Screening for Prediction of Referral and Outcome (OSPRO) Cohort. J Orthop Sports Phys Ther. 2015 Jul;45(7):512–526. doi:10.2519/jospt.2015.5900. PMID: 25996361.
- 13. Zeppieri G, Lentz TA, Moser MW, Farmer KF. Changes in Hip ROM and Strength over the Course of a Competitive Season in Collegiate Baseball Pitchers. Int J Sports Phys Ther. 2015 Aug;10(4):505-13. PMID: 26346849; PMCID: PMC4527197.
- 14. Chmielewski TL, George SZ, Tillman SM, Moser MW, **Lentz** TA, Indelicato PA, Trumble TN, Shuster JJ, Cicuttini FM, Leeuwenburgh C. Low- Versus High-Intensity Plyometric Exercise During Rehabilitation After Anterior Cruciate Ligament Reconstruction. Am J Sports Med. 2016 Mar;44(3):609–617. doi:10.1177/0363546515620583. PMID: 26797700.
- 15. **Lentz** TA, Beneciuk JM, Bialosky JE, Zeppieri G, Dai Y, Wu SS, George SZ. Development of a Yellow Flag Assessment Tool for Orthopaedic Physical Therapists: Results From the Optimal Screening for Prediction of Referral and Outcome (OSPRO) Cohort. J Orthop Sports Phys Ther. 2016 May;46(5):327–343. doi:10.2519/jospt.2016.6487. PMID: 26999408.
- 16. Simon CB, **Lentz** TA, Bishop MD, Riley JL, Fillingim RB, George SZ. Comparative Associations of Working Memory and Pain Catastrophizing With Chronic Low Back Pain Intensity. Phys Ther. 2016 Jul;96(7):1049–1056. doi:10.2522/ptj.20150335. PMID: 26700272. PMCID: PMC4935786.
- 17. Butera KA, **Lentz** TA, Beneciuk JM, George SZ. Preliminary Evaluation of a Modified STarT Back Screening Tool Across Different Musculoskeletal Pain Conditions. Phys Ther. 2016 Aug;96(8):1251–1261. doi:10.2522/ptj.20150377. PMID: 26847006. PMCID: PMC4992146.
- 18. Coronado RA, Simon CB, **Lentz** TA, Gay CW, Mackie LN, George SZ. Optimism Moderates the Influence of Pain Catastrophizing on Shoulder Pain Outcome: A Longitudinal Analysis. J Orthop Sports Phys Ther. 2017 Jan;47(1):21–30. doi:10.2519/jospt.2017.7068. PMID: 27819191.

- 19. Rhon DI, Lentz TA, George SZ. Unique Contributions of Body Diagram Scores and Psychosocial Factors to Pain Intensity and Disability in Patients With Musculoskeletal Pain. J Orthop Sports Phys Ther. 2017 Feb;47(2):88–96. doi:10.2519/jospt.2017.6778. PMID: 27819193.
- Lentz TA, Harman JS, Marlow NM, George SZ. Application of a Value Model for the Prevention and Management of Chronic Musculoskeletal Pain by Physical Therapists. Phys Ther. 2017 Mar 1;97(3):354–364. doi:10.2522/ptj.20160167. PMID: 28204786.
- 21. George SZ, Beneciuk JM, **Lentz** TA, Wu SS. The Optimal Screening for Prediction of Referral and Outcome (OSPRO) in patients with musculoskeletal pain conditions: a longitudinal validation cohort from the USA. BMJ Open. 2017 Jun 8;7(6):e015188. doi:10.1136/bmjopen-2016-015188. PMID: 28600371. PMCID: PMC5734477.
- 22. Beneciuk JM, **Lentz** TA, He Y, Wu SS, George SZ. Prediction of Persistent Musculoskeletal Pain at 12 Months: A Secondary Analysis of the Optimal Screening for Prediction of Referral and Outcome (OSPRO) Validation Cohort Study. Phys Ther. 2018 May 1;98(5):290–301. doi:10.1093/ptj/pzy021. PMID: 29669081. PMCID: PMC6256953.
- 23. George SZ, Beneciuk JM, Lentz TA, Wu SS, Dai Y, Bialosky JE, Zeppieri G. Optimal Screening for Prediction of Referral and Outcome (OSPRO) for Musculoskeletal Pain Conditions: Results From the Validation Cohort. J Orthop Sports Phys Ther. 2018 Jun;48(6):460–475. doi:10.2519/jospt.2018.7811. PMID: 29629615. PMCID: PMC6053060.
- 24. **Lentz** TA, Beneciuk JM, George SZ. Prediction of healthcare utilization following an episode of physical therapy for musculoskeletal pain. BMC Health Serv Res. 2018 Aug 20;18(1):648. doi:10.1186/s12913-018-3470-6. PMID: 30126409. PMCID: PMC6102917.
- 25. **Lentz** TA, Paterno MV, Riboh JC. So you think you can return to sport? Br J Sports Med. 2018 Dec;52(23):1482–1483. doi:10.1136/bjsports-2017-099006. PMID: 29483098.
- Lentz TA, Harman JS, Marlow NM, Beneciuk JM, Fillingim RB, George SZ. Factors associated with persistently high-cost health care utilization for musculoskeletal pain. PLoS One. 2019;14(11):e0225125. doi:10.1371/journal.pone.0225125. PMID: 31710655. PMCID: PMC6844454.
- 27. **Lentz** TA, Marlow NM, Beneciuk JM, Fillingim RB, George SZ. Comorbidity Subgroups Among Medicare Beneficiaries Seeking Health Care for Musculoskeletal Pain. J Gerontol A Biol Sci Med Sci. 2019 Jul 12;74(8):1310–1315. doi:10.1093/gerona/gly202. PMID: 30165549. PMCID: PMC6625584.
- 28. Rhon DI, O'Hagan E, Mysliwiec V, **Lentz** TA. Does Disordered Sleep Moderate the Relationship Between Pain, Disability and Downstream Health Care Utilization in Patients With Low Back Pain?: A Longitudinal Cohort From the US Military Health System. Spine (Phila Pa 1976). 2019 Nov 1;44(21):1481–1491. doi:10.1097/BRS.000000000003114. PMID: 31283558.
- 29. **Lentz** TA, Rhon DI, George SZ. Predicting Opioid Use, Increased Health Care Utilization and High Costs for Musculoskeletal Pain: What Factors Mediate Pain Intensity and Disability? J Pain. 2020;21(1–2):135–145. doi:10.1016/j.jpain.2019.06.004. PMID: 31201989. PMCID: PMC6908782.
- 30. Butera KA, George SZ, Lentz TA. Psychometric Evaluation of the Optimal Screening for Prediction of Referral and Outcome Yellow Flag (OSPRO-YF) Tool: Factor Structure, Reliability, and Validity. J Pain. 2020;21(5–6):557–569. doi:10.1016/j.jpain.2019.09.003. PMID: 31541719. PMCID: PMC7078059.
- 31. Beneciuk JM, Verstandig D, Taylor C, Scott D, Levin J, Osborne R, Bialosky JE, **Lentz** TA, Buck T, Davis AL, Harder C, Beneciuk MB, Wittmer V, Sylvester J, Rowe R, McInnes D, Fisher TP, McGarrie L. Musculoskeletal pain stakeholder engagement and partnership development: determining patient-centered research priorities. Res Involv Engagem. 2020;6:28. doi:10.1186/s40900-020-00192-8. PMID: 32514375. PMCID: PMC7268422.
- 32. George SZ, **Lentz** TA, Beneciuk JM, Bhavsar NA, Mundt JM, Boissoneault J. Framework for improving outcome prediction for acute to chronic low back pain transitions. Pain Rep. 2020;5(2):e809. doi:10.1097/PR9.00000000000000809. PMID: 32440606. PMCID: PMC7209816.
- 33. Malay MR, **Lentz** TA, O'Donnell J, Coles T, Mather Iii RC, Jiranek WA. Development of a Comprehensive, Nonsurgical Joint Health Program for People With Osteoarthritis: A Case Report. Phys Ther. 2020 Jan 23;100(1):127–135. doi:10.1093/ptj/pzz150. PMID: 31596479.
- 34. Rhon DI, **Lentz** TA, George SZ. Utility of catastrophizing, body symptom diagram score and history of opioid use to predict future health care utilization after a primary care visit for musculoskeletal pain. Fam Pract. 2020 Feb 19:37(1):81–90. doi:10.1093/fampra/cmz046. PMID: 31504460. PMCID: PMC7456974.
- 35. **Lentz** TA, Goode AP, Thigpen CA, George SZ. Value-Based Care for Musculoskeletal Pain: Are Physical Therapists Ready to Deliver? Phys Ther. 2020 Apr 17;100(4):621–632. doi:10.1093/ptj/pzz171. PMID: 31764990. PMCID: PMC7439230.

- 36. Lentz TA, Goertz C, Sharma I, Gonzalez-Smith J, Saunders R. Managing Multiple Irons in the Fire: Continuing to Address the Opioid Crisis and Improve Pain Management during a Public Health Emergency. NEJM Catalyst Innovation in Care Delivery. NEJM; 2020 Jun 22
- 37. George SZ, Li C, Luo S, Horn ME, **Lentz** TA. Longitudinal Monitoring of Pain Associated Distress With the Optimal Screening for Prediction of Referral and Outcome Yellow Flag Tool: Predicting Reduction in Pain Intensity and Disability. Arch Phys Med Rehabil. 2020 Oct;101(10):1763–1770. doi:10.1016/j.apmr.2020.05.025. PMID: 32599059.
- 38. Lentz TA, Curtis LH, Rockhold FW, Martin D, Andersson TLG, Arias C, Berlin JA, Binns C, Cook A, Cziraky M, Dent R, Desai M, Emmett A, Esserman D, George J, Hantel S, Heagerty P, Hernandez AF, Hucko T, Khan N, Lee SF, LoCasale R, Mardekian J, McCall D, Monda K, Normand S-L, Riesmeyer J, Roe M, Roessig L, Scott R, Siedentop H, Waldstreicher J, Wang L, Weerakkody G, Wolf M, Ellenberg SS. Designing, Conducting, Monitoring, and Analyzing Data from Pragmatic Randomized Clinical Trials: Proceedings from a Multi-stakeholder Think Tank Meeting. Ther Innov Regul Sci. 2020 Nov;54(6):1477–1488. doi:10.1007/s43441-020-00175-7. PMID: 32514736.
- 39. Morozumi T, Kon T, Orita S, **Lentz** TA, Hashikawa T, Hagihara Y, George SZ, Ohtori S, Terakado A. Development of the Japanese Version of the Optimal Screening for Prediction of Referral and Outcome Yellow Flag Assessment Tool: A Study of Reliability and Validity. J Spine Research. 2020; 11(1): 14-21. doi:10.34371/jspineres.2019-0005.
- 40. **Lentz** TA, Magill J, Myers H, Pietrosimone LS, Reinke EK, Messer M, Riboh JC. Development of Concise Physical Performance Test Batteries in Young Athletes. Med Sci Sports Exerc. 2020 Dec;52(12):2581–2589. doi:10.1249/MSS.000000000002422. PMID: 32555020.
- 41. **Lentz** TA, George SZ, Manickas-Hill O, Malay MR, O'Donnell J, Jayakumar P, Jiranek W, Mather RC. What General and Pain-associated Psychological Distress Phenotypes Exist Among Patients with Hip and Knee Osteoarthritis? Clin Orthop Relat Res. 2020 Dec;478(12):2768–2783. doi:10.1097/CORR.000000000001520. PMID: 33044310. PMCID: PMC7899410.
- 42. George SZ, Coffman CJ, Allen KD, Lentz TA, Choate A, Goode AP, Simon CB, Grubber JM, King H, Cook CE, Keefe FJ, Ballengee LA, Naylor J, Brothers JL, Stanwyck C, Alkon A, Hastings SN. Improving Veteran Access to Integrated Management of Back Pain (AIM-Back): Protocol for an Embedded Pragmatic Cluster-Randomized Trial. Pain Med. 2020 Dec 12;21(Suppl 2):S62–S72. doi:10.1093/pm/pnaa348. PMID: 33313728. PMCID: PMC7734660.
- 43. Magill JR, Myers HS, Lentz TA, Pietrosimone LS, Risoli T, Green CL, Reinke EK, Messer MR, Riboh JC. Healthy Pediatric Athletes Have Significant Baseline Limb Asymmetries on Common Return-to-Sport Physical Performance Tests. Orthop J Sports Med. 2021 Jan;9(1):2325967120982309. doi:10.1177/2325967120982309. PMID: 33614803. PMCID: PMC7869184.
- 44. Horn ME, George SZ, Li C, Luo S, Lentz TA. Derivation of a Risk Assessment Tool for Prediction of Long-Term Pain Intensity Reduction After Physical Therapy. J Pain Res. 2021;14:1515–1524. doi:10.2147/JPR.S305973. PMID: 34093037. PMCID: PMC8169054.
- 45. **Lentz** TA, Hellkamp AS, Bhavsar NA, Goode AP, Manhapra A, George SZ. Assessment of Common Comorbidity Phenotypes Among Older Adults With Knee Osteoarthritis to Inform Integrated Care Models. Mayo Clin Proc Innov Qual Outcomes. 2021 Apr;5(2):253–264. doi:10.1016/j.mayocpiqo.2020.09.011. PMID: 33997625. PMCID: PMC8105527.
- 46. Simon CB, Lentz TA, Ellis L, Bishop MD, Fillingim RB, Riley JL, George SZ. Static and Dynamic Pain Sensitivity in Adults With Persistent Low Back Pain: Comparison to Healthy Controls and Associations With Movement-evoked Pain Versus Traditional Clinical Pain Measures. Clin J Pain. 2021 Jul 1;37(7):494–503. doi:10.1097/AJP.000000000000945. PMID: 33999558. PMCID: PMC8194013.
- 47. Magill JR, Myers HS, **Lentz** TA, Pietrosimone L, Risoli T, Green CL, Reinke EK, Messer MR, Riboh JC. Establishing Age- and Sex-Specific Norms for Pediatric Return-to-Sports Physical Performance Testing. Orthop J Sports Med. 2021 Aug;9(8):23259671211023100. doi:10.1177/23259671211023101. PMID: 34435067. PMCID: PMC8381439.
- 48. George SZ, Lentz TA, Goertz CM. Back and neck pain: in support of routine delivery of non-pharmacologic treatments as a way to improve individual and population health. Transl Res. 2021 Aug;234:129–140. doi:10.1016/j.trsl.2021.04.006. PMID: 33901699. PMCID: PMC8340679.
- 49. Stearns ZR, Carvalho ML, Beneciuk JM, Lentz TA. Screening for Yellow Flags in Orthopaedic Physical Therapy: A Clinical Framework. J Orthop Sports Phys Ther. 2021 Sep;51(9):459–469. doi:10.2519/jospt.2021.10570. PMID: 34465140.

- 50. George SZ, Fritz JM, Silfies SP, Schneider MJ, Beneciuk JM, Lentz TA, Gilliam JR, Hendren S, Norman KS. Interventions for the Management of Acute and Chronic Low Back Pain: Revision 2021. J Orthop Sports Phys Ther. 2021 Nov;51(11):CPG1–CPG60. doi:10.2519/jospt.2021.0304. PMID: 34719942. PMCID: PMC10508241.
- 51. **Lentz** TA, Kallen MA, Deutscher D, George SZ. Development of Reliable and Valid Negative Mood Screening Tools for Orthopaedic Patients with Musculoskeletal Pain. Clin Orthop Relat Res. 2022 Feb 1;480(2):313–324. doi:10.1097/CORR.0000000000002082. PMID: 34878414. PMCID: PMC8747611.
- 52. **Lentz** TA, Kallen MA, Deutscher D, George SZ. Efficient Screening for Fear of Movement in Outpatient Settings: Short Form and Computer Adaptive Tests for Fear Avoidance and Negative Pain Coping. Phys Ther. 2022 Feb 1;102(2). doi:10.1093/ptj/pzab256. PMID: 35022785.
- 53. Levin JM, Baker R, Goltz DE, Wickman J, Lentz TA, Cook C, George SZ, Klifto CS, Anakwenze OA. Heterogeneity of pain-related psychological distress in patients seeking care for shoulder pathology. J Shoulder Elbow Surg. 2022 Apr;31(4):681–687. doi:10.1016/j.jse.2021.09.009. PMID: 34656777.
- 54. Christian RA, Lander ST, Bonazza NA, Reinke EK, Lentz TA, Dodds JA, Mulcahey MK, Ford AC, Wittstein JR. Venous Thromboembolism Prophylaxis and Hormonal Contraceptive Management Practice Patterns in the Perioperative Period for Anterior Cruciate Ligament Reconstruction. Arthrosc Sports Med Rehabil. 2022 Apr;4(2):e679–e685. doi:10.1016/j.asmr.2021.12.010. PMID: 35494294. PMCID: PMC9042882.
- 55. Golla V, Allen Lapointe NM, Silberberg M, Wang V, Lentz TA, Kaye DR, Sorenson C, Saunders R, Kaufman BG. Improving health equity for older people with serious illness through value based payment reform. J Am Geriatr Soc. 2022 Jul;70(7):2180–2185. doi:10.1111/jgs.17815. PMID: 35474173.
- 56. **Lentz** TA, Coronado RA, Master H. Delivering Value Through Equitable Care for Low Back Pain: A Renewed Call to Action. J Orthop Sports Phys Ther. 2022 Jul;52(7):414–418. doi:10.2519/jospt.2022.10815. PMID: 35580022.
- 57. Zeppieri G, George SZ, Bialosky J, Lentz TA. Patient-centered outcomes: Domain importance predicts health care use following physical therapy. PM R. 2022 Sep;14(9):1044–1055. doi:10.1002/pmrj.12680. PMID: 34296528.
- 58. Doorley JD, Lentz TA, Yeh GY, Wayne PM, Archer KR, Vranceanu A-M. Technology-Enhanced Delivery Models to Facilitate the Implementation of Psychologically Informed Practice for Chronic Musculoskeletal Pain. Phys Ther. 2022 Dec 30;103(1). doi:10.1093/ptj/pzac141. PMID: 36210757. PMCID: PMC10071498.
- 59. Cook CE, George SZ, Lentz T, Park C, Shaffrey CI, Goodwin CR, Than KD, Gottfried ON. High-Impact Chronic Pain Transition in Lumbar Surgery Recipients. Pain Med. 2023 Mar 1;24(3):258–268. doi:10.1093/pm/pnac150. PMID: 36200873.
- Morriss NJ, Kim BI, Poehlein E, Park CN, Lentz TA, Green CL, Lau BC. Association Between Preoperative Multidimensional Psychological Distress and Physical Function After Surgery for Sports-Related Injury. Orthop J Sports Med. 2023 Apr;11(4):23259671231163856. doi:10.1177/23259671231163854. PMID: 37113137. PMCID: PMC10126611.
- 61. **Lentz** TA, Gonzalez-Smith J, Huber K, Goertz C, Bleser WK, Saunders R. Overcoming Barriers to the Implementation of Integrated Musculoskeletal Pain Management Programs: A Multi-Stakeholder Qualitative Study. J Pain. 2023 May;24(5):860–873. doi:10.1016/j.jpain.2022.12.015. PMID: 36634887.
- 62. **Lentz** TA, Stephens BF, Abtahi AM, Schwarz J, Schoenfeld AJ, Rhoten BA, Block S, O'Brien A, Archer KR. Leveraging web-based prediction calculators to set patient expectations for elective spine surgery: a qualitative study to inform implementation. BMC Med Inform Decis Mak. 2023 Aug 3;23(1):149. doi:10.1186/s12911-023-02234-z. PMID: 37537577. PMCID: PMC10399016.
- 63. Ballengee LA, King HA, Simon C, **Lentz** TA, Allen KD, Stanwyck C, Gladney M, George SZ, Hastings SN. Partner engagement for planning and development of non-pharmacological care pathways in the AIM-Back trial. Clin Trials. 2023 Oct;20(5):463–472. doi:10.1177/17407745231178789. PMID: 37269070. PMCID: PMC10524642.
- 64. Peairs EM, Chari T, Kuehn SJ, Valan B, Rowe DG, Hurley ET, Aitchison AH, Paul AV, Henriquez A, Hendren S, Lentz TA, Péan CA, DeBaun M. The association of pre-existing mental health conditions and patient outcomes after lower extremity orthopaedic trauma: a scoping review. Eur J Orthop Surg Traumatol. 2023 Nov 13; doi:10.1007/s00590-023-03768-8. PMID: 37955721.
- 65. Jayakumar P, Crijns T, Misciagna W, Manickas-Hill O, Malay M, Jiranek W, Mather RC, **Lentz** TA. What Are the Underlying Mental Health Constructs Associated With Level of Capability in People With Knee and Hip Osteoarthritis? Clin Orthop Relat Res. 2023. In Press.
- 66. Cabell GH, Kwon NF, Sutton KF, **Lentz** TA, Lewis BD, Olson S, Mather RC 3rd. Pain-Associated Psychological Distress Is of High Prevalence in Patients With Hip Pain: Characterizing Psychological Distress and Phenotypes.

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- 67. **Lentz** TA, Coffman CJ, Cope T, Stearns Z, Simon CB, Choate A, Gladney M, France C, Hastings SN, George SZ. If You Build It, Will They Come? Patient and Provider Use of a Novel Hybrid Telehealth Care Pathway for Low Back Pain. Phys Ther. 2024 Feb 1;104(2):pzad127. doi: 10.1093/ptj/pzad127. PMID: 37756618; PMCID: PMC10851867.
- 68. Rhon DI, George SZ, Greenlee TA, Farrokhi S, **Lentz** TA. General and Pain-associated Psychological Distress Phenotypes Among Patients with Low Back Pain in the Military Health System. Arthritis Care Res (Hoboken). 2024 Feb 21. doi: 10.1002/acr.25315. Epub ahead of print. PMID: 38383982.
- 69. Beneciuk JM, George SZ, Simon CB, Ballengee LA, Lentz TA, Greco CM, Main CJ, Keefe FJ. On "Fragility and Back Pain: Lessons From the Frontiers of Biopsychosocial Practice." Nicholls DA. Phys Ther. 2023; 103:pzad040. https://doi.org/10.1093/ptj/pzad040. Phys Ther. 2024 Mar 1;104(3):pzae002. doi: 10.1093/ptj/pzae002. PMID: 38198743; PMCID: PMC10958281.
- 70. Sutton KF, Cabell GH, Ashley LW, **Lentz** TA, Lewis BD, Olson SA, Mather RC 3rd. Does psychological distress predict risk of orthopaedic surgery and postoperative opioid prescribing in patients with hip pain? A retrospective study. BMC Musculoskelet Disord. 2024 Apr 20;25(1):304. doi: 10.1186/s12891-024-07418-w. PMID: 38643071; PMCID: PMC11031887.
- 71. Ponce H, **Lentz** TA, Bozic K, Jayakumar P. Value-based Healthcare: The Value of Multi-skilled Clinicians in Delivering Whole-person Musculoskeletal Care. Clin Orthop Relat Res. 2024. In Press.
- 72. Kim BI, Wu KA, Morriss NJ, Cabell GH, **Lentz** TA, Lau BC. Correlation between the Optimal Screening for Prediction of Referral and Outcome Yellow Flag Tool and Patient-Reported Legacy Outcome Measures in Patients Undergoing Shoulder Surgery. JSES International. In Press
- 73. France C, Cook CE, Coffman CJ, Tumminello C, Choate A, George SZ, Hastings SN, Lentz TA. The Implementation of a Pain Navigator Program in the Department of Veterans Affairs' (VA) Health Care Systems. Pain Medicine. In Press
- 74. Garcia AN, Cook CE, **Lentz** TA, Pergolotti M, Ciccolella BM, Brozowsky D, Hopwood D. Predictors of patient experience for 89,205 physical and occupational therapy patients seen for musculoskeletal disorders: a retrospective cohort study. J Orthop Sports Phys Ther Open. In Press.
- 75. **Lentz** TA, Roundy P, Poehlein E, Green C, Mather RC, Jiranek W. Referral, Enrollment, and Health Care Use in a Comprehensive Patient-Centered Management Program for Osteoarthritis of the Hip and Knee. Osteoarthr Cartil Open. In Press
- 76. **Lentz** TA, Jochimsen KN, Ring D, Jayakumar P, Blackburn J. Communicating Complexity in Mental and Social Health. Clin Orthop Relat Res. 2025. In Press.

B. Books

- 1. Senesac CR, Bishop M. Finley's Interactive Cadaveric Dissection Guide. Jones and Barlett 2009. Contributor
- 2. Bishop MD, **Lentz** TA, George SZ. Assessment of Spondyloarthritis International Society Classification Criteria. Pathology and Intervention in Musculoskeletal Rehabilitation. 2016. p. 471–501. doi:10.1016/B978-0-323-31072-7.00012-9.

C. Digital output and other forms of public dissemination

Host, *Duke MSK Journal Club and Podcast*, Musculoskeletal Therapeutic Area, Duke Clinical Research Institute, 2021-present

Podcasts

- 1. "Ep 11: Prediction of Persistent Musculoskeletal Pain", *Duke DPTCast*. July 15, 2019. https://open.spotify.com/episode/3drjMU08wUxIrc4tftHp56
- 2. "Using OSPRO in your clinic", *Evidence in Motion*. February 12, 2020. https://evidenceinmotion.com/clinical-podcast-using-ospro-in-your-clinic-trevor-lentz/
- 3. "Ep 88: Screening for yellow flags", *JOSPT Insights*. June 20, 2022. https://podcasts.apple.com/ca/podcast/ep-88-screening-for-yellow-flags-with-dr-trevor-lentz/id1522929437?i=1000567108044
- 4. "Determining Physiological Distress with Yellow Flag Assessment Tool", *PT Elevated*. January 12, 2022. https://clinical.libsyn.com/ospro-yftrevor-lentz

- 5. "What Do Real-World Experiences Tell Us?", *The Healing Pain Podcast*. November 15, 2023. https://integrativepainscienceinstitute.com/latest_podcast/implementation-of-integrated-pain-management-programs-what-do-real-world-experiences-tell-us-with-trevor-lentz-pt-phd-mph/
- 6. "Relationships Always Matter", *PT Pintcast*. April 25, 2024. https://www.ptpintcast.com/2024/04/25/relationships-always-matter-f-adam-lutz-trevor-lentz-and-chris-lane/
- 7. "OSPRO Yellow Flag Assessment Tool", ORTHOSTATIC podcast. September 10, 2024

D. Abstracts (selected)

- 1. **Lentz** TA, Sutton Z, Greenberg S, Bishop M. Pain-related Fear of Movement Contributes to Self-reported Disability in Patients with Foot and Ankle Pathology. *J Orthop Sports Phys Ther* 40(1):A29, 2010.
- 2. **Lentz** TA, Tillman SM, Zeppieri G, George SZ, Chmielewski TL, Moser MW, Indelicato PA Development of a Clinical Prediction Rule for Return to Sport Status One Year following Anterior Cruciate Ligament Reconstruction. AOSSM Annual Meeting, Providence, RI 2010.
- 3. **Lentz** TA, George SZ, Zeppieri G, Moser MW, Farmer KW, Tillman SM, Chmielewski TL. Pain Intensity, Pain Catastrophizing, Kinesiophobia and Self-reported Function in the First Year following Anterior Cruciate Ligament Reconstruction. *The Journal of Pain*, Vol. 15, Issue 4, Supplement, Page S4, 2014.
- Lentz TA, Rhon DI, George SZ. Do Pain Intensity and Disability Directly Influence Healthcare Utilization and Costs for Musculoskeletal Pain? Poster Presentation, International Association for the Study of Pain (IASP) 17th World Congress, Boston, MA, 2018
- 5. **Lentz** TA, O'Donnell J, Malay MR, Jiranek WA, Mather RC III. Patient Subgrouping to Inform Treatment Pathway Development for a Comprehensive Osteoarthritis Care Program. Poster presentation. American Academy of Orthopaedic Surgeons (AAOS) Annual Meeting, Las Vegas, NV, 2019.
- 6. Malay MA, **Lentz** TA, O'Donnell J, Jiranek WA, Mather RC III. Early Outcomes of a Longitudinal, Comprehensive Lifestyle and Behavioral Health Management Program for Osteoarthritis in the United States. *Osteoarthritis and Cartilage*, Volume 28, S158 S159, 2020.
- 7. **Lentz** TA, Kallen M, Deutscher D, George SZ. Measuring Negative Mood, Positive Coping and Fear Avoidance in Musculoskeletal Pain Populations: Short Form Development Using Item Response Theory. *J Orthop Sports Phys Ther* 2021;51(1):CSM1
- 8. **Lentz** TA, Rhon DI, George SZ. Comparing STarT Back Screening Tool and OSPRO Yellow Flag Assessment Tool Subgroups in Patients Undergoing Care for Low Back Pain. *Journal of Pain*, Volume 24, Issue 4, 102, 2022.
- 9. **Lentz** TA, Cope TL, Stearns ZR, Simon CB, Choate A, Gladney M, France C, Coffman C, Hastings SN, George SZ. Referral and Utilization Metrics of a Hybrid Remote Care Delivery Model Led by Physical Therapists. *J Orthop Sports Phys Ther.* 53(2):CSM7, 2023.
- 10. **Lentz** TA, Fleming OD, Kinsey AF, Roundy P, Austin M, Christian AM, Mather RC III, Jiranek W. Assigning Psychological Phenotypes in Patients with Hip or Knee Osteoarthritis: Do Physical Therapists Agree? *J Orthop Sports Phys Ther.* 53(2):CSM8, 2023.

E. Non-refereed publications

- 1. **Lentz** TA, Huegel M, Bishop M. Determining the Most Likely Source of Symptoms in a Patient with Unilateral Upper Extremity Paresthesia. *Orthopaedic Practice*. 2008;20(3):112-20.
- 2. Goldman R, Lentz TA. The Use of Eccentric Overloading Exercise for the Treatment of Patellar Tendinosis in an Olympic-style Weightlifter: A Case Report. *Orthopaedic Practice*. 2010; 22(2):76-82.
- 3. Huber K, Gonzalez-Smith J, Saunders R, Goertz CM, Lentz TA. Exemplary Integrated Pain Management Programs: West Virginia University Center for Integrative Pain Management. Duke-Margolis Center for Health Policy Case Report, June 2021.
- 4. Gonzalez-Smith J, Huber K, Saunders R, Goertz CM, Lentz TA. Exemplary Integrated Pain Management Programs: University of Vermont Medical Center Comprehensive Pain Program. Duke-Margolis Center for Health Policy Case Report, August 2021.
- 5. Huber K, Gonzalez-Smith J, Saunders R, Bleser W, Goertz CM, **Lentz** TA. Exemplary Integrated Pain Management Programs: People's Community Clinic Integrative Pain Management Program. October 2021.

6. Huber K, Gonzalez-Smith J, Saunders R, Goertz CM, Lentz TA. Exemplary Integrated Pain Management Programs: University of New Mexico Pain Consultation and Treatment Center. October 2021.

F. Other forms of scholarship dissemination (not included above)

- 1. Lentz TA. The psychology of returning to sports after ACL surgery, Lower Extremity Review magazine, 2015.
- 2. **Contributor (interviewed),** Incorporating Psychologically Informed Practice: How PTs and PTAs can improve patient outcomes by looking at their patients as whole people. *APTA Magazine*, 2024

APPOINTMENTS AND RECOGNITION

A. Scientific reviewer

International Editorial Review Board, Journal of Orthopaedics and Sports Physical Therapy, 2016 - 2022

Member, External Grant Committee, Academy of Orthopaedic Physical Therapy, 2018

Review panel member, Focus on Therapeutic Outcomes (FOTO) D.L. Hart Memorial Outcomes Research Grant, 2019

Associate Editor, British Journal of Sports Medicine, 2018 - 2020

Member, External Grant Committee, Academy of Orthopaedic Physical Therapy, 2020

Scientific Merit Review Board member, Opioid Safety and Opioid Use Disorder (HSR9) panel, Veterans Affairs Health Services Research and Development Service (HSR&D), 2021

Review panel member, Scientific Merit Review Board Subcommittee on Health Care and Clinical Management, Veterans Affairs Health Services Research and Development Service (HSR&D), 2022

Review panel member, Biomarker (UG3/UH3) ZNS1 SRB-R (13), National Institute of Neurological Disorders and Stroke, 2023

Associate Editor, Journal of Orthopaedics and Sports Physical Therapy, 2022 - present

B. Professional societies, service organizations

Member, Health Volunteers Overseas, 2005 - 2006

Member, American Physical Therapy Association, 2006 - present

Member, Florida Physical Therapy Association, 2006 - 2017

District Representative, Northern District, Florida Physical Therapy Association, 2007 - 2014

Member, American Academy of Sports Physical Therapy, 2007 - 2015

Chair, Research Committee, UFHealth Orthopaedics and Sports Medicine Institute Department of Physical Therapy, 2011 - 2013

Member, Academy of Orthopaedic Physical Therapy, 2015 - present

Workgroup member, Academy of Orthopaedic Physical Therapy Value and Payment Workgroup, 2020 - 2023

Member, International Musculoskeletal Mental and Social Health Consortium (I-MESH), 2021 - present

Member, US Association for the Study of Pain (USASP), 2022 - present

Workgroup member, Value of Physical Therapy Report Workgroup, American Physical Therapy Association, 2023

Workgroup member, Practice Committee Payment Policy Workgroup, Academy of Orthopaedic Physical Therapy, 2023 - present

Planning Committee Member, 3rd Annual International Musculoskeletal Mental and Social Health Consortium (I-MESH) Symposium, 2023

Co-chair, Clinical Trials for Pain Research SIG, US Association for the Study of Pain (USASP), 2023 – 2025

President, International Musculoskeletal Mental and Social Health Consortium (I-MESH), 2024 – 2025

C. Advisory and consultant appointments

Pre-habilitation Consultant, University of Florida Athletic Association (UAA). Women's Soccer, Men's Football, Women's Basketball, 2009 – 2013

Voting Panel Member, American Academy of Orthopaedic Surgery Consensus Guidelines for Management of ACL Injuries, 2014

Subject matter expert, Consensus Conference to Develop Research and Public Policy Agendas, Academy of Orthoapedic Physical Therapy, Washington, DC, 2023

Advisory Board Member (unpaid), Institute for Musculoskeletal Advancement (iMSKA)

D. Professional awards and recognition

Outstanding Academic Performance Award, Department of Physical Therapy, University of Florida, 2006

Dean's Scholarship Finalist, College of Public Health and Health Professions, University of Florida, 2006

Excellence in Research Award, APTA Sports Physical Therapy Section, 2008

New Horizon Award, APTA Sports Physical Therapy Section, 2010

Excellence in Research Award, APTA Sports Physical Therapy Section, 2011

Graduate Student Fellowship, University of Florida, 2013

Miami-Marquette Challenge Award, Foundation for Physical Therapy, 2015

Viva J. Erickson Award for Outstanding Academic Leadership and Achievement, Foundation for Physical Therapy, 2016

Rehabilitation Science Travel Award, College of Public Health and Health Professions, University of Florida, 2016

Young Investigator Travel Award, American Pain Society, 2017

12th Annual Neuromuscular Plasticity Symposium Poster Award, Department of Physical Therapy, University of Florida 2017

Outstanding Paper Award, PhD in Rehabilitation Science Program, University of Florida, 2017

Dean's Scholar, College of Public Health and Health Professions, University of Florida, 2017

STOP Sports Injuries Award, American Orthopaedic Society for Sports Medicine, 2019

Chattanooga Research Award, American Physical Therapy Association, 2019

Outstanding Senior Alumnus, Department of Physical Therapy, University of Florida, 2021

George J. Davies – James A. Gould Excellence in Clinical Inquiry Award, Journal of Orthopaedic and Sports Physical Therapy, 2021

Patient Outcomes Award, Value Based Health Care (VBHC) Europe, for the Duke Joint Health Program, 2022

G.F. Gebhart Journal of Pain Young Investigator Award, United States Association for the Study of Pain (USASP), 2023 Innovative Practice Award, Academy of Orthopaedic Physical Therapy, 2024

RESEARCH SUPPORT

Current

Project Title: Feasibility Trial of a Novel Integrated Mindfulness and Acupuncture Program to Improve Outcomes after

Spine Surgery (I-MASS)

Grant number: 1R34AT012082-01A1

PI: Lentz, Trevor A. (Submitting PI); Goertz, Christine (MPI)

Role: Principal Investigator

Percent effort: 20%

Funding source: National Institutes of Health

Funding amount: \$724,500 **Duration**: 2023 - 2025

Project synopsis: The purpose of this R34 project is to assess the feasibility and acceptability of an integrated program that combines mindfulness delivered via mobile app (mHealth) with auricular acupuncture in individuals undergoing spine surgery (I-MASS) in preparation for a fully powered, pragmatic, randomized comparative effectiveness trial.

Project Title: Influence of an Early Physical Therapy Pathway on Costs and Outcomes for Treatment of Musculoskeletal

Conditions

Grant number: Q-16474 (Contract)

PI: Lentz, Trevor A.
Role: Principal Investigator
Percent effort: 4.5%

Funding source: ATI Holdings, LLC

Duration: 2023 - 2024

Project synopsis: The goal of this work is to evaluate cost savings associated with an early access model of physical

therapy for people with musculoskeletal conditions.

Project Title: Development of a Risk Assessment Tool to Enhance Physical Resilience in Older Adults following

Orthopedic Surgery for Acute Injury: A Feasibility and Acceptability Pilot Study

Grant number: N/A

PI: Lentz, Trevor A.; Pietrosimone, Laura

Role: Co-Principal Investigator

Percent effort: 5.5%

Funding source: Duke Claude D. Pepper Older Americans Independence Center (Duke OAIC) (NIA) P30 AG028716

Funding amount: \$80,000 **Duration**: 2022 - 2024

Project synopsis: The overarching goal of this line of research is to develop a risk assessment tool for delayed functional

recovery following surgery for lower extremity fracture in older adults.

Project Title: Risk of Care Escalation after Non-Pharmacologic Treatment: Leveraging Real World Physical Therapy

Data

Grant number: 1R21AR082657-01

PI: Lentz, Trevor A.
Role: Principal Investigator
Percent effort: 30%

Funding source: National Institutes of Health

Funding amount: \$442,750 **Duration**: 2022 - 2024

Project synopsis: This project will use two large real-world datasets to identify risk factors for poor response to non-pharmacologic care delivered by physical therapists – defined as 1) an unfavorable trajectory of pain-related disability, or

2) escalation of care to imaging, opioids, injection, or surgery following initiation of care.

Project Title: Improving Veteran Access to Integrated Management of Chronic Back Pain (AIM Back)

Grant number: 1UG3AT009790-01

PI: George, Steven Zachary

Role: Investigator **Percent effort**: 10%

Funding source: National Institutes of Health

Funding amount: \$7,900,000 **Duration**: 2017 - 2024

Project synopsis: The overall goal of this UG3 (Planning Phase)/UH3 (Demonstration Project) proposal is to improve access to recommended non-pharmacologic therapies for low back pain in the Department of VA Health Care System.

Completed

Project Title: Real-world implementation of a risk assessment tool for post-operative outcomes following spinal surgery

Grant number: N/A **PI**: Lentz, Trevor A.

Role: Principal Investigator

Percent effort: 41%

Funding source: Center on Health Services Training and Research (CoHSTAR); Brown University

Funding amount: \$59,946 **Duration**: 2020 - 2021

Project synopsis: The aim of this faculty fellowship project was to evaluate stakeholder perspectives on clinical

implementation of a web-based outcomes calculator for people undergoing spine surgery.

Project title: Implementing Integrated Pain Management: Lessons from North Carolina Health Systems and Beyond

Grant number: N/A **PI**: Lentz, Trevor A.

Role: Principal Investigator

Your % effort: 15%

Funding source: The Duke Endowment

Funding amount: \$239,600 **Duration:** 2019 - 2021

Project synopsis: This project aims to better understand the development and implementation of integrated pain

management models and to make recommendations about how they can be better deployed.

Project title: Refining Psychological Domain Measurement using Item Response Theory Analysis

Grant number: N/A **PI:** Lentz, Trevor A.

Role: Principal Investigator

Your % effort: N/A

Funding source: Focus on Therapeutic Outcomes (FOTO) D.L. Hart Memorial Outcomes Research Grant

Funding amount: \$10,000 Duration: 2018 - 2020

Project synopsis: This project will use item response theory (IRT) to develop a questionnaire that measures pain-related

fear avoidance, negative mood, and positive coping.

Project title: Comorbidity Subgroups among Medicare Beneficiaries Seeking Healthcare for Knee OA

Grant number: N/A PI: Lentz, Trevor A. Role: Principal Investigator Your % effort: N/A

Funding source: Duke Clinical Research Institute

Funding amount: \$15,000 **Duration:** 2018 – 2019

Project synopsis: This project identified common comorbidity subgroups among Medicare beneficiaries with knee OA as

a precursor to comparative effectiveness studies.

Project title: Promotion of Doctoral Studies PODS II

Grant number: N/A
PI: Lentz, Trevor A.
Role: Principal Investigator

Your % effort: N/A

Funding source: Foundation for Physical Therapy

Funding amount: \$15,000 Duration: 2016-2017

Project synopsis: Funding support for the post-candidacy phase of post-professional doctoral studies

Project title: Promotion of Doctoral Studies PODS I

Grant number: N/A **PI**: Lentz, Trevor A. **Role**: Principal Investigator

Your % effort: N/A

Funding source: Foundation for Physical Therapy

Funding amount: \$7,500 **Duration:** 2015-2016

Project synopsis: Funding support for the coursework phase of post-professional doctoral studies

MENTORING ACTIVITIES

Capstone Project Writing Mentor, University of Florida, Department of Physical Therapy, Gainesville, FL, 2008 – 2013

Research Mentor, Sports Medicine Orthopaedic Surgery & Sports Medicine Primary Care Fellowship Program, Department of Orthopaedic Surgery, Duke University, Durham, NC, 2017 - present

Faculty/DUHS Staff

- Morven Malay, peer-reviewed publication *Development of a Comprehensive, Nonsurgical Joint Health Program for People With Osteoarthritis: A Case Report,* 2019 2020
- Zachary Stearns, peer-reviewed publication Screening for Yellow Flags in Orthopaedic Physical Therapy: A Clinical Framework, 2017 2020
- Preston Roundy, Submitted abstract and paper in development *Navigating Real-World Challenges: Insights from a Comprehensive Osteoarthritis Management Program in an Academic Health Setting*, 2020 2023

Orthopedic Surgery Fellows

- Robert Christian, peer-reviewed publication Venous Thromboembolism Prophylaxis and Hormonal Contraceptive Management Practice Patterns in the Perioperative Period for Anterior Cruciate Ligament Reconstruction, 2021 – 2022
- Sarah Lander, peer-reviewed publication Venous Thromboembolism Prophylaxis and Hormonal Contraceptive Management Practice Patterns in the Perioperative Period for Anterior Cruciate Ligament Reconstruction, 2021 2022
- Myra Trivellas, abstract presentation *So you think you can judge: Agreement & Reliability in Clinical Phenotyping,* 2022 2023

Orthopaedic Residents

- Jay Levin, peer-reviewed publication *Heterogeneity of pain-related psychological distress in patients seeking care for shoulder pathology*, 2021 2022
- Grant Cabell, peer-reviewed publication *Pain associated psychological distress is of high prevalence in patients with hip pain: Characterizing psychological distress and phenotypes*, 2022 2023

Graduate Students

- Rupal Patel, PhD Committee member, University of Texas at Austin, successfully defended in 2023
- Lindsay Ballengee, PhD Committee member, Duke University, successfully defended in 2024
- Tyler Cope, PhD Committee co-chair, Duke University, anticipated defense in 2028

DPT fellows and residents

- Drew Lukes, Abstract presentation for Two-Year Non-Modifiable and Modifiable Predictors of Six-Year Function Following Primary Anterior Cruciate Ligament Reconstruction, 2021
- Daniel Lynch, Abstract presentation for Perseverance following anterior cruciate ligament reconstruction, 2021
- Tommy Otley, abstract presentation for *Relationships between Reported Wellness, External Load, and Countermovement Jump Performance in Male Collegiate Soccer Players*, 2022 2023
- Ryan Brooks, Presentation of *Physical Therapist Knowledge and Beliefs of Exercise for Lower Extremity Tendinopathy survey*, 2023
- John Justyn, ongoing mentorship for survey development to measure use of weighted ball programs among pitchers, 2023

Medical students

• Rafael Baker, submitted peer-reviewed manuscript *Preoperative Psychological Distress in Single vs. Multiple Tendon Rotator Cuff Tears*, 2021

- Kent Sutton, submitted peer-reviewed manuscript *Does Psychological Distress Predict Incidence of Hip Surgery and Postoperative Opioid Prescribing?: A retrospective cohort study*, 2021-2023
- Emily Peairs, peer-reviewed publication *The association of pre-existing mental health conditions and patient outcomes after lower extremity orthopaedic trauma: a scoping review, 2023*
- Billy Kim, submitted peer-reviewed manuscript A Novel Characterization of Tiered Psychological Distress Phenotypes in an Orthopaedic Sports Population, 2022 2023
- Nicholas Morriss, peer-reviewed publication Association Between Preoperative Multidimensional Psychological Distress and Physical Function After Surgery for Sports-Related Injury, 2022 - 2023

DPT students

- Min Hu, formal mentorship for Duke DPT Capstone Project
- Sing Yoo, formal mentorship for Duke DPT Capstone Project
- Aubrey Caraballo, formal mentorship for Duke DPT Capstone Project
- Nicholas Woodward, formal mentorship for Duke DPT Capstone Project

EDUCATION / TEACHING ACTIVITIES

Teaching and supporting learners

- 1. Psychological Considerations in Rehabilitation. PET 5936: Orthopedic Considerations in Athletic Training. Undergraduate Athletic Training Program, University of Florida, Gainesville, FL, 2008
- 2. Operative techniques and post-operative rehabilitation considerations of the shoulder. PHT 6770: Musculoskeletal Disorders II. Doctor of Physical Therapy Program, University of Florida, Gainesville, FL, 2008, 2009
- 3. Shoulder Unit (4 lectures). PHT 6770: Musculoskeletal Disorders II. Doctor of Physical Therapy Program, University of Florida, Gainesville, FL, 2010
- 4. Searching for Scientific Literature. PHT 6605: Evidence-Based Practice I. Doctor of Physical Therapy Program, University of Florida, Gainesville, FL, 2013, 2014, 2015, 2016
- 5. Accuracy of Diagnostic Tests. PHT 6605: Evidence-Based Practice I. Doctor of Physical Therapy Program, University of Florida, Gainesville, FL, 2014
- 6. Using Data Analytics to Drive Value-Based Care. PT 722: Management of Health Care Delivery. Doctor of Physical Therapy Program, Duke University, Durham, NC, 2018, 2019, 2020
- 7. Psychological Assessment in Musculoskeletal Pain: A Primer on the What, Why, How and When for Physical Therapists. Doctor of Physical Therapy Program, Florida Southern University, Lakeland, FL (virtual presentations), 2022, 2023
- 8. Best Practices for Collaborating with Statisticians, DCRI Fellowship Program, Duke University, Durham, NC, 2022
- 9. Population Health in Physical Therapy. PT 734: PT Professional Practice V. Doctor of Physical Therapy Program, Duke University, Durham, NC, 2023, 2024
- 10. Pain in the Athletic Population. PT 640: Pain Science. Doctor of Physical Therapy Program, Duke University, Durham, NC 2023, 2024

Development of courses / educational programs

 A Primer on Musculoskeletal Screening, Doctor of Physical Therapy (DPT) Program, Duke University, Durham, NC, 2018

Education management / leadership

1. Assisted in development of research-focused didactic component of Sports Medicine Orthopaedic Surgery & Sports Medicine Primary Care Fellowship Program, Department of Orthopaedic Surgery, Duke University, Durham, NC

INVITED LECTURES AND PRESENTATIONS

International Meetings:

- A Multi-Stakeholder Discussion about Overcoming Obstacles on the Path to Integrative Pain Management, International Congress on Integrative Medicine and Health, Academic Consortium on Integrative Medicine and Health, Phoenix, AZ, 2022
- 2. Measuring What Matters: Integrating Mental Health Assessment into Physiotherapy. SEFID VI International Conference on Physiotherapy & Pain. Spanish Society of Physiotherapy & Pain (SEFID). Valencia, Spain, 2024
- 3. Using Real-World Data to Interpret Screening for Pain Vulnerability and Resilience Tool Scores. International Association for the Study of Pain (IASP) World Congress on Pain, Amsterdam, Netherlands, 2024
- 4. The STarT Back Screening and OSPRO Yellow Flag Tools Give Complementary Information to Guide Care. International Association for the Study of Pain (IASP) World Congress on Pain, Amsterdam, Netherlands, 2024

Scientific Meetings – invited:

- 1. Mentoring: Promoting Excellence through Residency/Fellowship Programs Points of View, FPTA Annual Conference, Daytona Beach, FL, 2012
- 2. Influences of Pain Self-Efficacy on Pain Catastrophizing: Evidence for Mediation and Moderation Roles in Outpatient Orthopedic Physical Therapy. Brooks Rehabilitation Research Day, Jacksonville, FL, 2014
- 3. The Chronic Pain Conundrum: Bridging Neuroscience and Clinical Practice, Shands Continuing Education Lecture Series, Gainesville, FL, 2015
- 4. Running On All 4 Cylinders: Factors to Consider in Return-to-Run Decisions. Program session. APTA Combined Sections Meeting, Anaheim, CA, 2016
- 5. Integration of the Patient Activation Measure (PAM) Into Post-Acute Clinical Rehabilitation Settings. Masters of Public Health Thesis Oral Presentation. University of Florida, Gainesville, FL, 2016
- 6. Risk Model Development for Additional Healthcare Use Following an Episode of Physical Therapy for Musculoskeletal Pain. CoHSTAR Summer Institute, Boston, MA, 2016
- 7. Prediction of Persistently High Healthcare Costs due to Musculoskeletal Pain. Durham VA Center for Health Services Research in Primary Care, Durham, NC, 2017
- 8. The Athlete in Pain: Moving Beyond the Tissues to the Person. APTA Combined Sections Meeting, Washington, DC, 2019
- 9. Use of the OSPRO-ROS and YF as Part of Clinical Decision Making. Focus on Therapeutic Outcomes (FOTO) Clinical Outcomes Summit, Knoxville, TN, 2019
- 10. North Carolina's Response to the Opioid Epidemic: Physical Therapy Can Make a Difference! Panel Discussant. North Carolina Physical Therapy Association Fall Conference, Wilmington, NC, 2019
- 11. Challenges to Implementing Guideline Concordant Care for Low Back Pain: Update from a Pragmatic Trial in the Veteran's Health Administration System. Center on Health Services Training and Research (CoHSTAR) Summer Institute. Providence, RI, 2019
- 12. Designing, Conducting, Monitoring, and Analyzing Data From Pragmatic Randomized Clinical Trials: Proceedings From a Multi-stakeholder Think Tank Meeting. NIH Health Care Systems Collaboratory Grand Rounds (virtual presentation), 2020
- 13. Challenges and Opportunities for the Implementation of Integrated Pain Management Programs: Perspectives from a Multi-Stakeholder Roundtable, CoHSTAR Virtual Institute (online presentation), 2020
- 14. Taking the Pain out of Yellow Flag Screening: A Practical Approach to Identifying Pain-Related Psychological Distress in Clinical Care. Rehab Services Seminar Series, Vanderbilt University (virtual presentation), 2021
- 15. The Next Generation of Psychological Measurement in Musculoskeletal Pain. Musculoskeletal Grand Rounds, Optum (virtual presentation), 2021
- 16. The SPARE Psychological Screening Tools: What, Why, and How to Use in Clinical Practice. Athletico Physical Therapy (virtual presentation), 2022

- 17. This won't hurt a bit: Why and how to implement psychological screening in rehabilitation for musculoskeletal pain. Interdisciplinary Rehabilitation Research Seminar Series. Duke University, Durham, NC, 2022
- 18. Implementing Integrated Pain Management: Multi-Stakeholder Perspective on Challenges and Opportunities, Academic Consortium for Integrative Medicine and Health's Grand Rounds (virtual presentation), 2022
- 19. Addressing the Value Conundrum in Physical Therapy: Insights from Payers, Health Systems, and Researchers. Educational Session. APTA Combined Sections Meeting, San Diego, CA, 2023
- 20. Implementing Integrated Pain Management: Multi-Stakeholder Perspective on Challenges and Opportunities. Plenary and panel moderator. Integrative Pain Management Conference. Osher Center for Integrative Health at the University of Vermont, Burlington, VT, 2023
- 21. Eugene Michels Research Forum: Psychological Factors in Physical Therapy, Are We Encroaching Boundaries of Practice? APTA Combined Sections Meeting, San Diego, CA, 2023
- 22. The Research Perspective on Primary Care Physical Therapy Models of Care. Keynote presentation. Primary Care Physical Therapy Summit 2023: Rising to the Challenge, Newberg, OR, 2023
- 23. Mental Health Screening in Orthopedics: Opportunities, Challenges, & Misconceptions. 4th Annual William E. Garrett, Jr., MD, PhD Research Day. Duke University. Durham, NC, 2023
- 24. Mental Health Screening and Management in Rehabilitation: Opportunities, Challenges, and Misconceptions. Rehabilitation Research Seminar. University of Florida RSD program. Gainesville, FL, 2023
- 25. Mental Health Phenotyping in Osteoarthritis: From Concept to Implementation. University of North Carolina Core Center for Clinical Research. Chapel Hill, NC, 2023
- 26. Physical Therapists as Early-Contact Pain Care Providers: Implementation of Care Pathways in the US. APTA Combined Sections Meeting, Boston, MA, 2024
- 27. Patient and Provider Use of a Novel Hybrid Telehealth Care Pathway for Low Back Pain, in Advances in Rehabilitation Technology to Improve Health Outcomes. APTA Combined Sections Meeting, Boston, MA, 2024
- 28. Keeping It Real: Lessons from an Embedded Pragmatic Trial of Hybrid Care for Back Pain. APTA Combined Sections Meeting, Boston, MA, 2024
- 29. Addressing Psychosocial Contributors to Chronic Pain, University of North Carolina at Chapel Hill Sports Medicine Institute Annual Conference, Chapel Hill, NC, 2024

Courses, symposiums, workshops – invited:

- 1. Lead Fellow, DCRI Think Tank on "Emerging Techniques for Monitoring and Analyzing Data in Pragmatic Streamlined Trials", Washington, DC, 2019
- 2. Implementing Osteoarthritis Management Programs around the World. OARSI Pre-Congress Workshop (virtual workshop presentation), 2021
- 3. Addressing Inequities in Pain Care by Advancing Integrated Pain Management Programs. Integrative Medicine & Health Symposium, Academic Consortium for Integrative Health & Medicine (virtual program presentation), 2021
- 4. Opioid Webinar Series I: Duration and Intensity of Pain Pathophysiology, Mindset, and Circumstances. American Academy of Orthopaedic Surgeons, 2024

ACADEMIC, LEADERSHIP AND ADMINISTRATIVE ACTIVITIES – SCHOOL OF MEDICINE

Member, Duke Sports Medicine Faculty Research Committee, 2017 - present

Co-chief Fellow, Duke Clinical Research Institute Fellowship Program, 2018 - 2019

Steering Committee member, Duke Surgical Center for Outcomes Research and Equity in Surgery (SCORES), 2021 - 2023

Participant, Duke LEADER Program, 2021

Review panel member, Duke-Margolis Institute for Health Policy Bass Connections Program, 2022, 2023

ACADEMIC, LEADERSHIP AND ADMINISTRATIVE ACTIVITIES – HOSPITAL/DUHS

Member, Duke Health De	partment of Rehabilitation S	Services Ambulatory Car	re Learning Health	Unit, 2023 - present