

CURRICULUM VITAE

ANTHONY DELITTO, PhD, PT, FAPTA

School of Health & Rehabilitation Sciences

University of Pittsburgh

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EDUCATION AND TRAINING

SUNY @ Buffalo

Buffalo, NY

1975 1979

B.S., Physical Therapy, June, 1979

Washington University

St. Louis, MO

1980 1983

Physical Therapy

MHS/PT, Dec., 1983

Washington University

Department of Psychology

St. Louis, MO

1986-1990

Ph.D, August, 1990

APPOINTMENTS AND POSITIONS

Dean, SHRS

Mar 2016-present

Interim Dean

School of Health and Rehabilitation Sciences

University of Pittsburgh

July 2015-Feb 2016

Professor and Chair

Department of Physical Therapy

School of Health and Rehabilitation Sciences

University of Pittsburgh

VP Education and Research

Centers for Rehabilitation Services

UPMC Health System
Pittsburgh, PA

CERTIFICATION AND LICENSURE

New York: #006086 (inactive)
Missouri: #R0449
Pennsylvania: #PT-002600-E

MEMBERSHIP IN PROFESSIONAL AND SCIENTIFIC SOCIETIES

American Physical Therapy Association (APTA)
1977-present

APTA Section on Research
1979-present

APTA Section on Education
1996-present

APTA Section on Orthopaedics
1988-present

APTA Missouri Chapter
1979-1991

APTA Pennsylvania Chapter
1992-present

HONORS

Golden Pen Award, American Physical Therapy Association (APTA), March, 1992

Steven J. Rose Award Excellence in Research Award, Orthopedic Section, APTA (7 time winner)

- February, 1993
- February, 1994
- February, 1995
- February, 2003
- February, 2006
- February, 2007
- February, 2016

Marian Williams Award for Research in Physical Therapy, APTA, June, 1997

Catherine Worthingham Fellow, APTA, June, 2000

John HP Maley Lectureship, APTA, June, 2001

Outstanding Lifetime Achievement Award in Research, Pennsylvania Chapter, APTA, February, 2001

J. Warren Perry Allied Health Lecture Award, School of Public Health and Health Professions State University of NY at Buffalo, May, 2005

John HP Maley Award for Outstanding Contributions in Leadership and Research, Section on Research, APTA, June, 2006

Lucy Blair Service Award, APTA, June, 2007

2nd Annual Elam-Plowman Lecture, Department of Rehabilitation Science, University of Oklahoma, May, 2008

Mary McMillan Lecture Award, APTA, June, 2008

Barbara C. White Lecture Award, Commencement Speaker, College of Public Health and Health Professions, University of Florida, May, 2009

Richard W Bowling – Richard E. Erhard Orthopaedic Clinical Practice Award, Orthopaedic Section, APTA, Feb, 2010

Charles M. Magistro Distinguished Service Award, Foundation for Physical Therapy, June, 2012

Inaugural Marilyn R. Gossman Lecture for the Advancement of Physical Therapy, Department of Physical Therapy, University of Alabama at Birmingham, May, 2014

Helen J. Hislop Award for Outstanding Contribution to the Professional Literature, APTA, June, 2014

PUBLICATIONS IN REFEREED JOURNALS

1. Rothstein, J. M., Delitto, A., Sinacore, D. R., & Rose, S. J. (1983). Electromyographic, peak torque, and power relationships during isokinetic movement. *Physical Therapy*, 63(6), 926-933.
2. Rothstein, J. M., Delitto, A., Sinacore, D. R., & Rose, S. J. (1983). Muscle function in rheumatic disease patients treated with corticosteroids. *Muscle & Nerve*, 6(2), 128-135.
3. Sinacore, D. R., Rothstein, J. M., Delitto, A., & Rose, S. J. (1983). Effect of damp on isokinetic measurements. *Physical Therapy*, 63(8), 1248-1250.
4. Mueller, M. J., & Delitto, A. (1985). Selective criteria for successful long-term prosthetic use. *Physical Therapy*, 65(7), 1037-1040.

5. Cibulka, M. T., Rose, S. J., Delitto, A., & Sinacore, D. R. (1986). Hamstring muscle strain treated by mobilizing the sacroiliac joint. *Physical Therapy*, 66(8), 1220-1223.
6. Delitto, A., & Rose, S. J. (1986). Comparative comfort of three waveforms used in electrically eliciting quadriceps femoris muscle contractions. *Physical Therapy*, 66(11), 1704-1707.
7. McDonnell, M. K., Delitto, A., Sinacore, D. R., & Rose, S. J. (1987). Electrically elicited fatigue test of the quadriceps femoris muscle. Description and reliability. *Physical Therapy*, 67(6), 941-945.
8. Cibulka, M. T., Delitto, A., & Koldehoff, R. M. (1988). Changes in innominate tilt after manipulation of the sacroiliac joint in patients with low back pain. An experimental study. *Physical Therapy*, 68(9), 1359-1363.
9. Delitto, A., McKowen, J. M., McCarthy, J. A., Shively, R. A., & Rose, S. J. (1988). Electrically elicited co-contraction of thigh musculature after anterior cruciate ligament surgery. A description and single-case experiment. *Physical Therapy*, 68(1), 45-50.
10. Delitto, A., Rose, S. J., McKowen, J. M., Lehman, R. C., Thomas, J. A., & Shively, R. A. (1988). Electrical stimulation versus voluntary exercise in strengthening thigh musculature after anterior cruciate ligament surgery.[Erratum appears in *Phys Ther* 1988 Jul;68(7):1145]. *Physical Therapy*, 68(5), 660-663.
11. Delitto, A. (1989). Subjective measures and clinical decision making. *Physical Therapy*, 69(7), 585-589.
12. Delitto, A., Brown, M., Strube, M. J., Rose, S. J., & Lehman, R. C. (1989). Electrical stimulation of quadriceps femoris in an elite weight lifter: a single subject experiment. *International Journal of Sports Medicine*, 10(3), 187-191.
13. Delitto, A., Crandell, C. E., & Rose, S. J. (1989). Peak torque-to-body weight ratios in the trunk: a critical analysis.[Erratum appears in *Phys Ther* 1989 Apr;69(4):301]. *Physical Therapy*, 69(2), 138-143.
14. Delitto, A., & Lehman, R. C. (1989). Rehabilitation of the athlete with a knee injury. *Clinics in Sports Medicine*, 8(4), 805-840.
15. Delitto, A., Shulman, A. D., & Rose, S. J. (1989). On developing expert-based decision-support systems in physical therapy: the NIOSH low back atlas. *Physical Therapy*, 69(7), 554-558.
16. Diamond, J. E., Mueller, M. J., Delitto, A., & Sinacore, D. R. (1989). Reliability of a diabetic foot evaluation.[Erratum appears in *Phys Ther* 1989 Nov;69(11):994]. *Physical Therapy*, 69(10), 797-802.
17. Mueller, M. J., Diamond, J. E., Delitto, A., & Sinacore, D. R. (1989). Insensitivity, limited joint mobility, and plantar ulcers in patients with diabetes mellitus. *Physical Therapy*, 69(6), 453-459; discussion 459-462.
18. Mueller, M. J., Diamond, J. E., Sinacore, D. R., Delitto, A., Blair, V. P., 3rd, Drury, D. A., & Rose, S. J. (1989). Total contact casting in treatment of diabetic plantar ulcers. Controlled clinical trial. *Diabetes Care*, 12(6), 384-388.
19. Delitto, A. (1990). Isokinetic dynamometry. *Muscle & Nerve*, 13 Suppl, S53-57.
20. Delitto, A., & Snyder-Mackler, L. (1990). Muscle stimulators. *Archives of Physical Medicine & Rehabilitation*, 71(9), 711-712.
21. Delitto, A., & Snyder-Mackler, L. (1990). Two theories of muscle strength augmentation using percutaneous electrical stimulation. *Physical Therapy*, 70(3), 158-164.

22. Sinacore, D. R., Delitto, A., King, D. S., & Rose, S. J. (1990). Type II fiber activation with electrical stimulation: a preliminary report. *Physical Therapy*, 70(7), 416-422.
23. Snyder-Mackler, L., & Delitto, A. (1990). Valgus stress test study. *Physical Therapy*, 70(3), 204-205.
24. Tenhula, J. A., Rose, S. J., & Delitto, A. (1990). Association between direction of lateral lumbar shift, movement tests, and side of symptoms in patients with low back pain syndrome. *Physical Therapy*, 70(8), 480-486.
25. Delitto, A., Rose, S. J., Crandell, C. E., & Strube, M. J. (1991). Reliability of isokinetic measurements of trunk muscle performance. *Spine*, 16(7), 800-803.
26. Delitto, A., Strube, M. J., Shulman, A. D., & Minor, S. D. (1992). A study of discomfort with electrical stimulation. *Physical Therapy*, 72(6), 410-421; discussion on 421-414.
27. Cibulka, M. T., & Delitto, A. (1993). A comparison of two different methods to treat hip pain in runners. *Journal of Orthopaedic & Sports Physical Therapy*, 17(4), 172-176.
28. Delitto, A., Cibulka, M. T., Erhard, R. E., Bowling, R. W., & Tenhula, J. A. (1993). Evidence for use of an extension-mobilization category in acute low back syndrome: a prescriptive validation pilot study. *Physical Therapy*, 73(4), 216-222; discussion 223-218.
29. Diamond, J. E., Mueller, M. J., & Delitto, A. (1993). Effect of total contact cast immobilization on subtalar and talocrural joint motion in patients with diabetes mellitus. *Physical Therapy*, 73(5), 310-315.
30. Delitto, A. (1994). Are measures of function and disability important in low back care? *Physical Therapy*, 74(5), 452-462.
31. Erhard, R. E., Delitto, A., & Cibulka, M. T. (1994). Relative effectiveness of an extension program and a combined program of manipulation and flexion and extension exercises in patients with acute low back syndrome. *Physical Therapy*, 74(12), 1093-1100.
32. Sinacore, D. R., Bander, B. L., & Delitto, A. (1994). Recovery from a 1-minute bout of fatiguing exercise: characteristics, reliability, and responsiveness. *Physical Therapy*, 74(3), 234-241; discussion 241-234.
33. Sinacore, D. R., Jacobson, R. B., & Delitto, A. (1994). Quadriceps femoris muscle resistance to fatigue using an electrically elicited fatigue test following intense endurance exercise training. *Physical Therapy*, 74(10), 930-939; discussion 939-942.
34. Snyder-Mackler, L., Delitto, A., Stralka, S. W., & Bailey, S. L. (1994). Use of electrical stimulation to enhance recovery of quadriceps femoris muscle force production in patients following anterior cruciate ligament reconstruction. *Physical Therapy*, 74(10), 901-907.
35. Delitto, A., Erhard, R. E., & Bowling, R. W. (1995). A treatment-based classification approach to low back syndrome: identifying and staging patients for conservative treatment. *Physical Therapy*, 75(6), 470-485; discussion 485-479.
36. Delitto, A., & Snyder-Mackler, L. (1995). The diagnostic process: examples in orthopedic physical therapy. *Physical Therapy*, 75(3), 203-211.
37. Irrgang, J. J., Delitto, A., Hagen, B., Huber, F., & Pezzullo, D. (1995). Rehabilitation of the injured athlete. *Orthopedic Clinics of North America*, 26(3), 561-577.
38. Rudy, T. E., Boston, J. R., Lieber, S. J., Kubinski, J. A., & Delitto, A. (1995). Body motion patterns during a novel repetitive wheel-rotation task. A comparative study of healthy subjects and patients with low back pain. *Spine*, 20(23), 2547-2554.
39. Snyder-Mackler, L., Delitto, A., Bailey, S. L., & Stralka, S. W. (1995). Strength of the quadriceps femoris muscle and functional recovery after reconstruction of the anterior

- cruciate ligament. A prospective, randomized clinical trial of electrical stimulation. *Journal of Bone & Joint Surgery - American Volume*, 77(8), 1166-1173.
40. Hakim, R. M., Gruen, G. S., & Delitto, A. (1996). Outcomes of patients with pelvic-ring fractures managed by open reduction internal fixation. *Physical Therapy*, 76(3), 286-295.
 41. Nowakowski, P., Delitto, A., & Erhard, R. E. (1996). Lumbar spinal stenosis. *Physical Therapy*, 76(2), 187-190.
 42. Brach, J. S., VanSwearingen, J., Delitto, A., & Johnson, P. C. (1997). Impairment and disability in patients with facial neuromuscular dysfunction. *Otolaryngology - Head & Neck Surgery*, 117(4), 315-321.
 43. Fritz, J. M., Erhard, R. E., Delitto, A., Welch, W. C., & Nowakowski, P. E. (1997). Preliminary results of the use of a two-stage treadmill test as a clinical diagnostic tool in the differential diagnosis of lumbar spinal stenosis. *Journal of Spinal Disorders*, 10(5), 410-416.
 44. Jette, A. M., & Delitto, A. (1997). Physical therapy treatment choices for musculoskeletal impairments. *Physical Therapy*, 77(2), 145-154.
 45. Cibulka, M. T., Sinacore, D. R., Cromer, G. S., & Delitto, A. (1998). Unilateral hip rotation range of motion asymmetry in patients with sacroiliac joint regional pain. *Spine*, 23(9), 1009-1015.
 46. Delitto, A. (1998). Clinicians and researchers who treat and study patients with low back pain: are you listening? *Physical Therapy*, 78(7), 705-707.
 47. Fritz, J. M., Delitto, A., Erhard, R. E., & Roman, M. (1998). An examination of the selective tissue tension scheme, with evidence for the concept of a capsular pattern of the knee.[Erratum appears in *Phys Ther* 1998 Dec;78(12):1339]. *Physical Therapy*, 78(10), 1046-1056; discussion 1057-1061.
 48. Fritz, J. M., Delitto, A., Welch, W. C., & Erhard, R. E. (1998). Lumbar spinal stenosis: a review of current concepts in evaluation, management, and outcome measurements. *Archives of Physical Medicine & Rehabilitation*, 79(6), 700-708.
 49. Delitto, A. (2000). Mobilization of surgically stabilized pelvis dangerous. *Journal of Orthopaedic & Sports Physical Therapy*, 30(11), 702; author reply 703-704.
 50. Fritz, J. M., Delitto, A., Vignovic, M., & Busse, R. G. (2000). Interrater reliability of judgments of the centralization phenomenon and status change during movement testing in patients with low back pain. *Archives of Physical Medicine & Rehabilitation*, 81(1), 57-61.
 51. Fitzgerald, G. K., & Delitto, A. (2001). Considerations for planning and conducting clinic-based research in physical therapy. *Physical Therapy*, 81(8), 1446-1454.
 52. Fritz, J. M., George, S. Z., & Delitto, A. (2001). The role of fear-avoidance beliefs in acute low back pain: relationships with current and future disability and work status. *Pain*, 94(1), 7-15.
 53. Pantano, K. J., Irrgang, J. J., Burdett, R., Delitto, A., Harner, C., & Fu, F. H. (2001). A pilot study on the relationship between physical impairment and activity restriction in persons with anterior cruciate ligament reconstruction at long-term follow-up. *Knee Surgery, Sports Traumatology, Arthroscopy*, 9(6), 369-378.
 54. Delitto, A. (2002). "Russian electrical stimulation": putting this perspective into perspective. *Physical Therapy*, 82(10), 1017-1018.
 55. George, S. Z., & Delitto, A. (2002). Management of the athlete with low back pain. *Clinics in Sports Medicine*, 21(1), 105-120.

56. Bizzini, M., Childs, J. D., Piva, S. R., & Delitto, A. (2003). Systematic review of the quality of randomized controlled trials for patellofemoral pain syndrome. *Journal of Orthopaedic & Sports Physical Therapy*, 33(1), 4-20.
57. Fritz, J. M., Delitto, A., & Erhard, R. E. (2003). Comparison of classification-based physical therapy with therapy based on clinical practice guidelines for patients with acute low back pain: a randomized clinical trial. *Spine*, 28(13), 1363-1371; discussion 1372.
58. Hicks, G. E., Fritz, J. M., Delitto, A., & Mishock, J. (2003). Interrater reliability of clinical examination measures for identification of lumbar segmental instability. *Archives of Physical Medicine & Rehabilitation*, 84(12), 1858-1864.
59. Wainner, R. S., Fritz, J. M., Irrgang, J. J., Boninger, M. L., Delitto, A., & Allison, S. (2003). Reliability and diagnostic accuracy of the clinical examination and patient self-report measures for cervical radiculopathy. *Spine*, 28(1), 52-62.
60. Childs, J. D., Fritz, J. M., Flynn, T. W., Irrgang, J. J., Johnson, K. K., Majkowski, G. R., & Delitto, A. (2004). A clinical prediction rule to identify patients with low back pain most likely to benefit from spinal manipulation: a validation study.[Summary for patients in *Ann Intern Med*. 2004 Dec 21;141(12):I39; PMID: 15611484]. *Annals of Internal Medicine*, 141(12), 920-928.
61. Childs, J. D., Whitman, J. M., Sizer, P. S., Pugia, M. L., Flynn, T. W., & Delitto, A. (2005). A description of physical therapists' knowledge in managing musculoskeletal conditions. *BMC Musculoskeletal Disorders*, 6, 32.
62. Delitto, A. (2005). Research in low back pain: time to stop seeking the elusive "magic bullet". *Physical Therapy*, 85(3), 206-208.
63. Delitto, A. (2005). What will it take? The need for large-scale trials. *Physical Therapy*, 85(5), 466.
64. George, S. Z., & Delitto, A. (2005). Clinical examination variables discriminate among treatment-based classification groups: a study of construct validity in patients with acute low back pain. *Physical Therapy*, 85(4), 306-314.
65. Hicks, G. E., Fritz, J. M., Delitto, A., & McGill, S. M. (2005). Preliminary development of a clinical prediction rule for determining which patients with low back pain will respond to a stabilization exercise program. *Archives of Physical Medicine & Rehabilitation*, 86(9), 1753-1762.
66. Shekelle, P. G., & Delitto, A. M. (2005). Treating low back pain. *Lancet*, 365(9476), 1987-1989.
67. Wainner, R. S., Fritz, J. M., Irrgang, J. J., Delitto, A., Allison, S., & Boninger, M. L. (2005). Development of a clinical prediction rule for the diagnosis of carpal tunnel syndrome. *Archives of Physical Medicine & Rehabilitation*, 86(4), 609-618.
68. Atlas, S. J., & Delitto, A. (2006). Spinal stenosis: surgical versus nonsurgical treatment. *Clinical Orthopaedics & Related Research*, 443, 198-207.
69. Brennan, G. P., Fritz, J. M., Hunter, S. J., Thackeray, A., Delitto, A., & Erhard, R. E. (2006). Identifying subgroups of patients with acute/subacute "nonspecific" low back pain: results of a randomized clinical trial. *Spine*, 31(6), 623-631.
70. Delitto, A. (2006). Patient outcomes and clinical performance: Parallel paths or inextricable links? *Journal of Orthopaedic & Sports Physical Therapy*, 36(8), 548-549.

71. Childs, J. D., Whitman, J. M., Pugia, M. L., Sizer, P. S., Jr., Flynn, T. W., & Delitto, A. (2007). Knowledge in managing musculoskeletal conditions and educational preparation of physical therapists in the uniformed services. *Military Medicine*, 172(4), 440-445.
72. Fitzgerald, L. M., Delitto, A., & Irrgang, J. J. (2007). Validation of the clinical internship evaluation tool. *Physical Therapy*, 87(7), 844-860.
73. Neiman, G. S., Craik, R., Delitto, A., Hallowell, B., Moore, C., Oliver, R. E., . . . Tate, C. A. (2007). NAPRAH symposium: enhancing faculty research career development: infrastructure and mentoring models. *Journal of Allied Health*, 36(2), e179-191.
74. Schneider, M., Homonai, R., Moreland, B., & Delitto, A. (2007). Interexaminer reliability of the prone leg length analysis procedure. *Journal of Manipulative & Physiological Therapeutics*, 30(7), 514-521.
75. Delitto, A. (2008). We are what we do. *Physical Therapy*, 88(10), 1219-1227. doi: <http://dx.doi.org/10.2522/ptj.2008.mcmillan.lecture>
76. Godges, J. J., Anger, M. A., Zimmerman, G., & Delitto, A. (2008). Effects of education on return-to-work status for people with fear-avoidance beliefs and acute low back pain. *Physical Therapy*, 88(2), 231-239.
77. McDonough, S. M., Liddle, S. D., Hunter, R., Walsh, D. M., Glasgow, P., Gormley, G., . . . Baxter, G. D. (2008). Exercise and manual auricular acupuncture: a pilot assessor-blind randomised controlled trial. (The acupuncture and personalised exercise programme (APEP) trial). *BMC Musculoskeletal Disorders*, 9, 31. doi: <http://dx.doi.org/10.1186/1471-2474-9-31>
78. Schneider, M., Erhard, R., Brach, J., Tellin, W., Imbarlina, F., & Delitto, A. (2008). Spinal palpation for lumbar segmental mobility and pain provocation: an interexaminer reliability study. *Journal of Manipulative & Physiological Therapeutics*, 31(6), 465-473. doi: <http://dx.doi.org/10.1016/j.jmpt.2008.06.004>
79. Weiner, D. K., Perera, S., Rudy, T. E., Glick, R. M., Shenoy, S., & Delitto, A. (2008). Efficacy of percutaneous electrical nerve stimulation and therapeutic exercise for older adults with chronic low back pain: a randomized controlled trial. *Pain*, 140(2), 344-357. doi: <http://dx.doi.org/10.1016/j.pain.2008.09.005>
80. Brewer, B. R., Pradhan, S., Carvell, G., & Delitto, A. (2009). Application of modified regression techniques to a quantitative assessment for the motor signs of Parkinson's disease. *IEEE Transactions on Neural Systems & Rehabilitation Engineering*, 17(6), 568-575. doi: <http://dx.doi.org/10.1109/TNSRE.2009.2034461>
81. Brewer, B. R., Pradhan, S., Carvell, G., & Delitto, A. (2009). Feature selection for classification based on fine motor signs of Parkinson's disease. *Conference Proceedings: Annual International Conference of the IEEE Engineering in Medicine & Biology Society*, 2009, 214-217. doi: <http://dx.doi.org/10.1109/IEMBS.2009.5333129>
82. Piva, S. R., Fitzgerald, G. K., Irrgang, J. J., Fritz, J. M., Wisniewski, S., McGinty, G. T., Delitto, A. (2009). Associates of physical function and pain in patients with patellofemoral pain syndrome. *Archives of Physical Medicine & Rehabilitation*, 90(2), 285-295. doi: <http://dx.doi.org/10.1016/j.apmr.2008.08.214>
83. Piva, S. R., Fitzgerald, G. K., Wisniewski, S., & Delitto, A. (2009). Predictors of pain and function outcome after rehabilitation in patients with patellofemoral pain syndrome. *Journal of Rehabilitation Medicine*, 41(8), 604-612. doi: <http://dx.doi.org/10.2340/16501977-0372>
84. Al-Sayegh, N. A., George, S. E., Boninger, M. L., Rogers, J. C., Whitney, S. L., & Delitto, A. (2010). Spinal mobilization of postpartum low back and pelvic girdle pain: an evidence-

- based clinical rule for predicting responders and nonresponders. *Pm & R*, 2(11), 995-1005. doi: <http://dx.doi.org/10.1016/j.pmrj.2010.07.481>
85. Ambrosio, F., Wolf, S. L., Delitto, A., Fitzgerald, G. K., Badylak, S. F., Boninger, M. L., & Russell, A. J. (2010). The emerging relationship between regenerative medicine and physical therapeutics. *Physical Therapy*, 90(12), 1807-1814. doi: <http://dx.doi.org/10.2522/ptj.20100030>
 86. McDonough, S. M., Tully, M. A., O'Connor, S. R., Boyd, A., Kerr, D. P., O'Neill, S. M., . . . Hurley, D. A. (2010). The back 2 activity trial: education and advice versus education and advice plus a structured walking programme for chronic low back pain. *BMC Musculoskeletal Disorders*, 11, 163. doi: <http://dx.doi.org/10.1186/1471-2474-11-163>
 87. Pradhan, S. D., Brewer, B. R., Carvell, G. E., Sparto, P. J., Delitto, A., & Matsuoka, Y. (2010). Assessment of fine motor control in individuals with Parkinson's disease using force tracking with a secondary cognitive task. *Journal of Neurologic Physical Therapy*, 34(1), 32-40. doi: <http://dx.doi.org/10.1097/NPT.0b013e3181d055a6>
 88. Schneider, M. J., Brach, J., Irrgang, J. J., Abbott, K. V., Wisniewski, S. R., & Delitto, A. (2010). Mechanical vs manual manipulation for low back pain: an observational cohort study. *Journal of Manipulative & Physiological Therapeutics*, 33(3), 193-200. doi: <http://dx.doi.org/10.1016/j.jmpt.2010.01.010>
 89. Foster, N. E., & Delitto, A. (2011). Embedding psychosocial perspectives within clinical management of low back pain: integration of psychosocially informed management principles into physical therapist practice--challenges and opportunities. *Physical Therapy*, 91(5), 790-803. doi: <http://dx.doi.org/10.2522/ptj.20100326>
 90. Goldstein, M. S., Scalzitti, D. A., Bohmert, J. A., Brennan, G. P., Craik, R. L., Delitto, A., . . . Shields, R. K. (2011). Vitalizing practice through research and research through practice: the outcomes of a conference to enhance the delivery of care. *Physical Therapy*, 91(8), 1275-1284. doi: <http://dx.doi.org/10.2522/ptj.20100339>
 91. Cochran-Comstock, S., Delitto, A., & Oddo, C. (2012). Rothstein Roundtable Podcast--"Medical Homes, PACA, IFDS--Where do physical therapists fit in a reforming health care environment? ". *Physical Therapy*, 92(8), 1078. doi: <http://dx.doi.org/10.2522/ptj.2012.92.8.1078>
 92. Delitto, A., George, S. Z., Van Dillen, L. R., Whitman, J. M., Sowa, G., Shekelle, P., Orthopaedic Section of the American Physical Therapy, A. (2012). Low back pain.[Summary for patients in *J Orthop Sports Phys Ther*. 2012 Apr;42(4):381; PMID: 22466289]. *Journal of Orthopaedic & Sports Physical Therapy*, 42(4), A1-57. doi: <http://dx.doi.org/10.2519/jospt.2012.0301>
 93. Hunter, R. F., McDonough, S. M., Bradbury, I., Liddle, S. D., Walsh, D. M., Dhamija, S., Baxter, G. D. (2012). Exercise and Auricular Acupuncture for Chronic Low-back Pain: A Feasibility Randomized-controlled Trial. *Clinical Journal of Pain*, 28(3), 259-267. doi: <http://dx.doi.org/10.1097/AJP.0b013e3182274018>
 94. Roach, K. E., Frost, J. S., Francis, N. J., Giles, S., Nordrum, J. T., & Delitto, A. (2012). Validation of the Revised Physical Therapist Clinical Performance Instrument (PT CPI): Version 2006. *Physical Therapy*, 92(3), 416-428. doi: <http://dx.doi.org/10.2522/ptj.20110129>

95. Ambrosio, F., Boninger, M. L., Brubaker, C. E., Delitto, A., Wagner, W. R., Shields, R. K., . Rando, T. A. (2013). Guest editorial: emergent themes from second annual symposium on regenerative rehabilitation, Pittsburgh, Pennsylvania. *Journal of Rehabilitation Research & Development*, 50(3), vii-xiv.
96. McDonough, S. M., Tully, M. A., Boyd, A., O'Connor, S. R., Kerr, D. P., O'Neill, S. M., Hurley, D. A. (2013). Pedometer-driven walking for chronic low back pain: a feasibility randomized controlled trial. *Clinical Journal of Pain*, 29(11), 972-981. doi: <http://dx.doi.org/10.1097/AJP.0b013e31827f9d81>
97. Moore, C. G., Schenkman, M., Kohrt, W. M., Delitto, A., Hall, D. A., & Corcos, D. (2013). Study in Parkinson disease of exercise (SPARX): translating high-intensity exercise from animals to humans. *Contemporary Clinical Trials*, 36(1), 90-98. doi: <http://dx.doi.org/10.1016/j.cct.2013.06.002>
98. Deyo, R. A., Dworkin, S. F., Amtmann, D., Andersson, G., Borenstein, D., Carragee, E., Weiner, D. K. (2014). Focus article: report of the NIH Task Force on Research Standards for Chronic Low Back Pain. *European Spine Journal*, 23(10), 2028-2045. doi: <http://dx.doi.org/10.1007/s00586-014-3540-3>
99. Deyo, R. A., Dworkin, S. F., Amtmann, D., Andersson, G., Borenstein, D., Carragee, E., Weiner, D. K. (2014). Report of the NIH Task Force on research standards for chronic low back pain. *Journal of Pain*, 15(6), 569-585. doi: <http://dx.doi.org/10.1016/j.jpain.2014.03.005>
100. Saper, R. B., Sherman, K. J., Delitto, A., Herman, P. M., Stevans, J., Paris, R., Weinberg, J. (2014). Yoga vs. physical therapy vs. education for chronic low back pain in predominantly minority populations: study protocol for a randomized controlled trial. *Trials [Electronic Resource]*, 15, 67. doi: <http://dx.doi.org/10.1186/1745-6215-15-67>
101. White, N. T., Delitto, A., Manal, T., Miller, S. (2015). "The American Physical Therapy Association's top five choosing wisely recommendations." *Phys Ther* 95(1): 9-24
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PROFESSIONAL ACTIVITIES

Funded Active Grants

Name: Anthony Delitto

- a. Source: NICHD/NCMRR and NINDS
- b. Grant Number: 5K12HD055931-08
- c. Role on Project: Program Director
- d. September 01, 2013-Aug 31, 2017

- e. 10% effort

Title: Multicenter Career Development Program for Physical and Occupational Therapists (PT/OT CDP)

Abstract: This training grant is an institutional K-12 support mechanism for physical and occupational therapists. The goal of this proposal is to establish a Multicenter Career Development Program for Physical and Occupational Therapists (PT/OT CDP) targeted at new investigators so that they can acquire the skills to address the need for research that validates rehabilitation approaches, optimizes treatments and incorporates new technologies to manage disease and conditions that limit peoples' potential to live productive and healthy lives. This proposal is in direct response to the needs stated in RFA-HD-06-010 and in the Rehabilitation Medicine Summit (Frontera WR, et al, 2006) to build research capacity in Rehabilitation Medicine.

Name: Anthony Delitto

- a. Source: NIH/NINDS
- b. Grant Number: 1 R01 NS074343
- c. Study Principal Investigators: Margaret Schenkman, PhD, and Daniel Corcos, PhD
- d. Biostatistician: Charity G. Moore, PhD
- e. Role on Project: Site Principal Investigator
- f. Dec 01, 2011 – Nov 30, 2015
- g. 10% effort

Title: Exploratory Study Of Different Doses Of Endurance Exercise In People With Parkinson Disease: The SPARX Study

Primary aim

1. To determine whether individuals with de novo Parkinson's disease (naïve to drug treatment) can achieve the randomly assigned levels of mean exercise intensity (60-65% HRmax or 80-85% HRmax) and adhere to the exercise protocol.

Secondary Aim

1. Determine whether moderate- or high-intensity endurance exercise [or both] warrants further investigation as a therapeutic intervention for motor symptoms in the treatment of de novo Parkinson's disease by conducting a futility trial, and
2. Document the incidence of adverse events and 6-month attrition associated with endurance exercise for each exercise arm (i.e., mean 60-65% HRmax and mean 80-85% HRmax groups).

Name: Anthony Delitto

- a. Source: Foundation for Physical Therapy
- b. Study PI: Linda Resnik, PT, Ph.D, Brown University (Prime)
- c. Role on Project: Site Co-PI (with G. Kelley Fitzgerald)
- d. Dates/Costs: May 01, 2015-April 30, 2020, \$1.5 million total
- e. 5% effort

Title: Center on Health Services Training and Research (CoHSTAR)

The specific goals of CoHSTAR are to:

1. Build health services research infrastructure to facilitate interdisciplinary health services/health policy research by physical therapist scientists.

2. Expand the number of physical therapist health services/health policy researchers by training highly skilled, physical therapist health services/health policy researchers
3. Increase the quantity and quality of physical therapy health services/health policy research by supporting high quality pilot and small studies that lead to external funding and scholarship.
4. Build upon active and growing research programs at collaborating institutions to create a sustainable, long-term pipeline for PT health services and health policy research training.

Name: Anthony Delitto

- a. Source of Funding: Patient Centered Outcomes Research Institute (PCORI)
- b. Contract Number: PCS1402-10867
- c. Study PI: Anthony Delitto
- d. Study Co-PI: Robert Saper, Boston Medical Center
- e. Role on Project: Principal Investigator
- f. July 01, 2015-June 30, 2020
- g. 5 years, \$12,174,689 (direct plus indirect)
- h. 40% effort

Title: Targeted Interventions to Prevent Chronic Low Back Pain in High Risk Patients: A Multi-Site Pragmatic RCT

Aims

1. **Primary Specific Aims:** In patients with acute LBP who are assessed as “high risk” for transition to chronic, we will compare guideline-based PCP care compared with PCP plus PT-CBT. Our primary outcome measure will be the proportion of patients that transition to chronic LBP by six months. We plan to use the operational definition of chronic LBP from the NIH Research Task Force on Chronic LBP,(3) which includes the following patient-centered questions: (1) How long has back pain been an ongoing problem for you? (2) How often has back pain been an ongoing problem for you over the past 6 months? Chronic LBP will be defined as a history of LBP for more than 3 months in duration and an ongoing problem for at least half the days in the past 6 months.
2. **Secondary Specific Aims:** We will compare patient-centered outcomes at 6-months; we will follow patients to 12-months and assess transition to chronic and patient-centered outcomes; We will follow patients with acute LBP who are at “low” or “medium” risk in a non-randomized cohort to determine the proportion that transitions to chronic, and to assess patient-centered outcomes (e.g., pain, function, work status), and LBP-related medical procedures (e.g., imaging, epidurals, surgery).

Pending Active Grants

Name: Anthony Delitto

- a. Source of Funding: Patient Centered Outcomes Research Institute (PCORI)
- b. Title: Prompt Referral to Physical Therapy to Prevent the Progression of Disability and Reduce Health Service Utilization in People with Knee Osteoarthritis
- c. Study PI: Kelley Fitzgerald
- d. Role on Project: Co-Investigator
- e. Jan 01, 2016-Dec 31, 2020
- f. 5 years, \$7,552,235

g. 5% effort

Primary Specific Aim: In patients with symptomatic knee OA, we will compare guideline-based PCP care compared with PCP care plus prompt referral to evidence-based physical therapy in reducing functional pain.

Secondary Aims: Secondary aims will include: 1) examining whether predictors of inadequate pain response (e.g., sex, BMI, history of depression and diabetes) of pharmacological treatment are treatment modifiers for our treatment groups, and 2) determining differences in health services utilization over a one year period between treatment groups.

Name: Anthony Delitto

- a. Source: NIH/NIAMS
- b. Title: Mechanobiology Biomarkers to Guide Treatment for Low Back Pain
- c. Study PI: G. Sowa
- d. Role on project: Co-investigator
- e. Dates/Costs: TBD; \$1,500,000
- f. 2% effort

Name: Anthony Delitto

- a. Source: NIH/NIDDK
- b. Title: National Obesity Research Center
- c. Study PI: J. Jakicic
- d. Role on Grant: Co-investigator
- e. Dates/Costs: TBD; \$750,000
- f. 5% effort

Expired Grants

Name: Anthony Delitto

- a. Source: National Institute for Arthritis, Musculoskeletal and Skin Diseases (1R01AR/NS45622-01A1)
- b. Role on Project: Principal Investigator
- c. Dates and Costs of entire Project: 9/01/2000 – 3/31/2005, \$1,248,725
- d. 35% effort

Title: A Randomized Clinical Trial of Treatment for Lumbar Spinal Stenosis

Primary Aims

1. To compare patient outcomes after non-surgical or surgical treatment for lumbar spinal stenosis
2. To evaluate gender differences in outcomes after treatment for lumbar spinal stenosis

Secondary Aim:

1. To identify pre-treatment measures that are prognostic indicators for good outcomes for both surgical and non-surgical treatment for lumbar spinal stenosis.

Name: Anthony Delitto

- a. Source: National Institute Complimentary and Alternative Medicine (1R01AT00985-01A2)
- b. Role on Project: Co-investigator; Weiner D PI
- c. Dates and Costs of entire Project: 9/01/2003-5/31/2007,
- d. 10% effort

Title: Functional Impact of PENS for 65+ Chronic Low Back Pain

Primary aims of this study are:

1. To test the effectiveness of PENS in reducing the pain intensity in community-dwelling older adults with CLBP.
2. To test the effectiveness of combining PENS with a general conditioning and aerobic exercise program (GCAE) to improve the pain-related disability of these patients.

Secondary aim

1. To test the effectiveness of PENS+GCAE in improving the physical and psychosocial functioning of community-dwelling older adults with CLBP.

Name: Anthony Delitto

- a. Source: National Institute on Aging (NIA) Claude Pepper Center Older Americans Independence Center
- b. Role on Project: Principal Investigator (10% effort) on Pilot Project (Stephanie Studenski, PI on Center Grant)
- c. Dates and Costs of entire Project: 7/01/2004-6/30/2007

Title: An Investigation of Balance Interventions in Older Adults with Walking Disability

Primary Objectives: Our primary aims are to:

1. Evaluate the feasibility of, and barriers to, delivering a group-based exercise regimen of skill-enhancement strategies to older adults with and without WMD and PN. We will refine our intervention based on these findings.
2. Develop initial estimates of treatment effect in the three subject groups on clinical indicators of gait, balance and balance confidence.
3. Develop initial estimates of treatment effect in the three subject groups on laboratory indicators of gait in two conditions 1) usual gait and 2) response to a sudden request to turn.

Name: Anthony Delitto

- a. Source: Foundation for Physical Therapy
- b. Role on Project: Principal Investigator
- c. Dates and Costs of entire Project: 4/1/97 - 3/31/00, \$600,000

Title: Center for the Study of Work-Related Low Back Pain

Primary Aims

1. to evaluate the relative short and long term effectiveness of treatment-based classification versus generic approaches in the acute management of work-related low back injury in a population of nurses and nurses aides
2. to evaluate the moderating influences of psychosocial issues (depression, anxiety, psychological distress and job satisfaction) and physical factors (stresses from job tasks evaluated using biomechanical models) on treatment outcome (health quality of life, return to work rate, recurrence rate and short and long term service utilization)

3. to evaluate present outcome assessments using newer psychometric testing procedures with the aim of developing better assessment tools for patients with work-related low back injury
4. to test the hypothesis that individuals who display a positive postural component during a treadmill test (increased symptoms of claudication with level as compared to uphill walking) will have higher levels of satisfaction, lower self-reported disability scores and can achieve greater walking distances without symptoms of claudication than those who undergo decompression but do not have a positive postural component

Name: Anthony Delitto

- a. Source: Foundation for Physical Therapy
- b. Role on project: Co-Principal Investigator(Lynn Snyder-Mackler, PI)
- c. Dates and Costs of entire project: 4/1/91 - 3/31/93, \$13,516
- d. Specific Aims of Project:

Title: Electrical Stimulation Versus Volitional Exercise in Rehabilitation of the Anterior Cruciate Ligament Deficient Patient

Primary Aims

1. To conduct a Multicenter Randomized Clinical Trial assessing specific rehabilitation protocols on patients who have undergone anterior cruciate ligament reconstruction;
2. To compare four different treatment regimens designed to improve quadriceps femoris muscle function;
3. To calculate dose response curves for the electrically stimulated torque and quadriceps strength gains

Name: Anthony Delitto

- a. Source: University of Pittsburgh Small Grants
- b. Role on project: Principal Investigator
- c. Dates and Costs of entire project: 7/1/92 - 6/30/93, \$6575
- d. Specific Aims of Project:

Title: Electrical Stimulation Versus Volitional Exercise in Rehabilitation of the Anterior Cruciate Ligament Deficient Patient

1. To conduct a Multicenter Randomized Clinical Trial assessing specific rehabilitation protocols on patients who have undergone anterior cruciate ligament reconstruction;
2. To compare four different treatment regimens designed to improve quadriceps femoris muscle function;
3. To calculate dose response curves for the electrically stimulated torque and quadriceps

Name: Anthony Delitto

- a. Source: Focus on Therapeutic Outcomes (FOTO) Group
- b. Role on Project: Co-Investigator (Alan M. Jette, PI)
- c. Dates and Costs of entire project: 5/1/93-12/31/93, \$14,724
- d. Specific Aims of Project:

Title: Clinical Outcome Database Management Service

Name: Anthony Delitto

- a. Source: Baltimore Therapeutic Equipment Company (BTE)
- b. Role on Project: Co-Principal Investigator
- c. Dates and Costs of entire project: 1/1/92-12/31/93; \$ 2975

Title: Reliability of a 3-D Computerized Measurement of Lumbar Spine Motion

Four studies will be conducted that will address the following primary areas: (1) reliability of the VECTOR system; (2) biomechanical differences between low back pain subjects and healthy individuals; (3) clinical utility of the VECTOR protocols; and (4) an x-ray study to assess the validity of the VECTOR system.

Name: Anthony Delitto

- a. Source: National Institute of Arthritis, Musculoskeletal and Skin Diseases (R01 AR38698)
- b. Role on Project: Investigator (Thomas Rudy, PI)
- c. Dates and Costs of Entire Project: 1990-1994; \$890,105 (direct costs)
- d. Specific Aims:

Title: CBP: A Biobehavioral Model of Functional Capacity

The primary purpose of the remaining years of this granting period will be to determine the relative contributions of specific physiological and psychological contributors to performance on a set of dynamic functional capacity tasks and to evaluate the changes in these contributors as a result of an intensive rehabilitation program.

Name: Anthony Delitto

- a. Source: Missouri Physical Therapy Association
- b. Title: Concurrent Validation of the Oswestry Low Back Questionnaire and the Sickness Impact Profile.
- c. Role on Project: Principal Investigator
- d. Dates and Costs of Entire Project: \$4,000 for 1 year (approved and funded; 1990)

Seminars and Invited Lectureships (since 2007 only)

“Evidence-Based Practice: Why?”

Presented to the Italian Physiotherapy Association inaugural meeting
Rome, Italy
March, 2007

“Linking evidence-based care and outcomes to provide value-based physical therapy”

Distinguished Speaker, 2nd annual Elam-Plowman Lecture in Orthopaedic Physical Therapy
Department of Rehabilitation Sciences
University of Oklahoma
May, 2008

Barbara C. White Lecturer Award Commencement Speaker for Class of 2009
University of Florida College of Public Health and Health Professions
Department of Physical Therapy
Gainesville, FL

May, 2009

Rothstein Debate/Roundtable; APTA NEXT/Annual Conference

Organized all debates and roundtables 2007-present

Participated as a presenter in 2007-2009; 2011; 2013

“Management of Low-Back Pain (LBP) in the Outpatient Physical Therapy Setting: An Evidence-Based, QI Approach”

Presented to UPMC Horizon Physical Therapists

Erie PA

October, 2010

“Quantitative Assessment of a Value-Based Payment for Physical Therapy”

Combined Sections Meeting, APTA

New Orleans, LA

Feb, 2011

“Will Value-Based Payment Bridge the Gap between Evidence-Based and Everyday Practice?”

Presentation to Emory University faculty and community PTs as part of Marquette Challenge course

Atlanta, GA

March, 2011

“Value-Based Payment: What does this mean?”

PT 2011

National Harbor, MD

June, 2011

“Diagnosis and Classification in CER”

Boston University Rehabilitation Outcomes Center

Boston, MA

June, 2012

“Bundling: How Can it Work for PT?”

Boston Health and Disability Research Institute

Boston, MA

June, 2012

“LBP: When Will We Tire of the Same Old Song and Dance?”

Grand Rounds

Boston Medical Center

August, 2012

“LBP: When Will We Tire of the Same Old Song and Dance?”

Continuing Education Workshop sponsored by University of St. Augustine

St. Augustine, FL
December, 2012

“Selecting Targets for Clinical Performance & Outcome Measures”
Boston Health and Disability Research Institute
Boston, MA
June, 2013

“Low Back Pain Clinical Guidelines”
APTA Combined Sections Meeting
San Diego, CA
Feb, 2013

“LBP: When Will We Tire of the Same Old Song and Dance?”
Inaugural Section on Orthopaedics, APTA Meeting
Orlando, FL
May, 2013

“Implementing Classification-Based Low Back Care”
Italian Congress of Physiotherapy
Naples, Italy
May, 2013

“Demonstrating physical therapy as valued added in the management of chronic musculoskeletal conditions”
APTA PT 2013
Salt Lake City, UT
June, 2013

“Implementing Evidence-Based Standards in Clinical Care”
Presentation to Mediserve, Inc.
Phoenix, AZ
June, 2013

“Calculating Clinical Batting Averages” and “Implementing Evidence-Based Standards in Clinical Care”
Continuing Education Workshop and Graduation Address
Harris County Health
Houston, TX
September, 2013

“Examining Barriers and Solutions for Adoption of Evidence Based Medicine in Clinical Practice”
Invited presentation to Association College of Chiropractic Consultants
Chicago, IL

October, 2013

“Eugene Michels Forum: To practice or not to practice? That is the question of specificity”

Moderator

APTA Combined Sections Meeting

Las Vegas, NV

February, 2014

“LBP: When Will We Tire of the Same Old Song and Dance? (Rounds)

“Clinical Performance, Evidence-Based Practice and Payment: The Perfect Storm” (all day workshop)

Rehabilitation Institute of Chicago

Chicago, IL

April, 2014

“Calculating your Clinical Batting Average”

University of Medicine and Dentistry New Jersey (UMDNJ)/ Rutgers

Newark, NJ

May, 2014

“LBP: When Will We Tire of the Same Old Song and Dance?”

Invited Presentation to Mayo Clinic

Rochester, MN

June, 2014

Other Research Related Activities

1. NIH

a. Study Sections

- i. Loan Repayment Program (ZAR1 KM (M1)); SRO Kan Ma
- ii. Loan Repayment Program SRO: Sathasiva B. Kandasamy
- iii. NIAMS Clinical Trials (AMSC 1); SRO Charles Washabaugh

b. Chair-elect, National Advisory Board for Medical Rehabilitation Research, NICHD/NCMRR

c. NIH Blue Ribbon Panel on Rehabilitation Research (2011-2013)

d. Data Safety Monitoring Board

- i. Riddle (UM1-AR-062800), NIAMS
- ii. Goldberg (1-R01-AR-053960-01), NIAMS

Service (Past 2 years only)

1. University and Medical School

- a. Member, Search Committee, Chancellor for University of Pittsburgh (elected member representing non-medical Schools of Health Sciences), 2013-2014
- b. SHRS Representative, Health Policy Institute, Schools of Health Sciences, University of Pittsburgh

- c. SHRS Representative, Clinical Translational Science Institute, University of Pittsburgh, 2010-present
 - d. SHRS representative, Executive Committee, Rehabilitation Institute, UPMC/University of Pittsburgh
 - e. Board of Directors, Aging Institute
 - f. Stern Collaboration, Health Policy Institute
 - g. Member, Quality Committees formed by Stephen Shapiro, Chief Scientific Officer, UPMC
 - i. Low back Pain Guideline Committee (M. Boninger, Chair; V. Trott, Assistant to S Shapiro))
 - ii. Total Joint Bundling Committee (L. Crossett, Chair; V. Trott, Assistant to S. Shapiro)
 - h. Primary Care Working Group of the Pain Medicine Service Center (A Wasan, Chair)
 - i. Data Committee, Comparative Effectiveness Research Committee, Health Policy Institute (J Kahn, Chair)
 - j. Vice President, Education and Research, UPMC Centers for Rehab Services
2. Community
- a. American Physical Therapy Association (APTA)
 - i. Chair, Choosing Wisely Campaign
 - ii. APTA Board of Directors Task Force, Excellence in Physical Therapy Education
 - iii. Editorial Board Member, PTJ (journal of American Physical Therapy Association)
 - 1. Chair, Rothstein Roundtable Committee
 - b. Board of Directors, Yes You Can Dance (www.yesyoucandance.org)