

Address: McMaster University
School of Rehabilitation Science, IAHS Building
1400 Main Street West, Hamilton, ON, CANADA L8S 1C7

Internet Address: HaNSA@mcmaster.ca

Fax: 905-524-0069 (ATT: HaNSA)

Membership (in alphabetical order)**Core Members**

Lisa Carlesso	University Health Network. Toronto Western Research Institute
Charles H. Goldsmith	Faculty of Health Sciences, Simon Fraser University & Arthritis Research Centre of Canada
Anita R. Gross	Centric Health and LifeMark Physiotherapy & School of Rehabilitation Sciences, McMaster University
Margaret Lomotan	School of Rehabilitation Science, McMaster University
Joy MacDermid	School of Rehabilitation Science, McMaster University
Colleen McPhee	Highland Physio & Meadowlands Physiotherapy Clinic
William Parkinson	Wm. L. Parkinson & Associates & School of Rehabilitation Science, McMaster University
Michael Pierrynowski	School of Rehabilitation Science, McMaster University
P. Lina Santaguida	Clinical Epidemiology & Biostatistics, McMaster University
Dave Walton	School of Physiotherapy, University of Western Ontario

Affiliate Members

James Dickey	Department of Kinesiology, University of Western Ontario
Nadine Graham	Meadowlands Physiotherapy Clinic
Dinesh Kumbhare	Department of Medicine, McMaster University
Laurie McLaughlin	School of Rehabilitation Science, McMaster University
Paul Missiuna	St. Joseph's Healthcare Hamilton
John Riva	Department of Family Medicine, McMaster University
Geoff Schneider	Faculty of Medicine, University of Calgary
Ashley Smith	Evidence Sport and SpinalTherapy

Active Clinical Partners

AIM Clinic (Contact: Tony Magliocco)
Beamsville Physiotherapy (Contact: Sue Staresnick)
Calgary Private Practices (Contact: Michael Westaway; Kathryn Schneider)
Centric Health, LifeMark Physiotherapy - Belmont (Contact: Laura Ritchie)
Centric Health, LifeMark Physiotherapy - Hamilton (Contact: Anita R. Gross; John McCluskie)
Centric Health, LifeMark Physiotherapy - St Thomas (Contact: Corinne Roos; Joleen Elder)
Dr. Joseph Park & Associates (Contact: Tim Rogers)
Dundas Community Physiotherapy & Rehabilitation (Contact: Milena Szpakowski)
Eramosa Physiotherapy Associates (Contact: Jacquie Sinkledam)
Highland Physiotherapy Associates (Contact: Paul Jaegar)
Meadowlands Physiotherapy Clinic (Contact: Nadine Graham)
Peak Performance Physiotherapy (Contact: Greg Spadoni; Natalie Greig; Adrienne Hol)
Performance Physiotherapy (Contact: Brad Balsor)

Vitality Physiotherapy & Associates (Contact: Diana Last)

Student Investigators

Graduate

Jordan Miller

PhD (Supervisor: Joy MacDermid)

School of Rehabilitation Sciences, McMaster University

Hiten Thakker

MSc (Supervisor: Joy MacDermid)

School of Rehabilitation Sciences, McMaster University

Industry Partners

Gold - Centric Health/LifeMark Physiotherapy

Corporate Affiliate

(Links with Other Groups)

Cervical Overview Group (COG)

International Collaboration on Neck (ICON)

Background

HaNSA is a transdisciplinary team of clinical scientists with expertise in orthopedic manual therapy, physical medicine & rehabilitation, surgery, clinical epidemiology, psychology, statistics, and movement analysis who meet monthly (inaugural meeting 2002-01-17) to discuss clinical issues pertaining to the epidemiology (incidence, prevalence), costs, risk factors (individual, psycho-social, occupational), prevention, and treatment of workers and patients with neck disorders with associated arm disability. Through research, clinical practice and education, our mission is to serve workers and patients with neck disability by evaluating, promoting and delivering effective therapy. As members of HaNSA, we are all committed to fulfilling our mission with caring and excellence.

Current Research Funding

Grants Currently Holding			
Source	Purpose	Amount	Period of Award
Physiotherapy Foundation of Canada - CAMPT Founders Award	Clinical and biological responses of people with neck pain being treated with manual therapy of varying duration and frequency: A pilot study	\$10,000	2013-06/2015-05 PI: Miller J, Co-Investigators: Piernowski M, Gross AR, MacDermid J, Walton D, Goldsmith CH

Past Research Projects without External Funding

McLaughlin LM, Goldsmith CH: Studies of Measurement Properties of Capnography in a variety of subjects. 2008/2013.

2015-04-07

Past Research Funding

Grants Held			
Source	Purpose	Amount	Period of Award
Orthopaedic Division	Exploring the future viability of cervical spine manipulation among Canadian manipulative physiotherapists	\$3,900	2014 Carlesso LC, Yeung E, Chesworth BM, MacDermid J
Lawson Health Research Institute	Facet vs. trigger point injections for relief of chronic non-cancer neck pain	\$14,915	2013/2014 Walton D, Loh E, Mehta S
Ministry of Health and Long Term Care, Primary Health Care seed grant	Cervical Manipulation and Adverse Events: Assessing the risk amongst an international multicentre cohort of orthopaedic manual physiotherapists	\$8,000	2010-07/2011-03 MacDermid J, Carlesso LC, Thabane L, Santaguida L.
Canadian Pediatric Surveillance Program (CPSP) Women and Children's Health Research Institute (WCHRI) Application	Active Surveillance of Serious Adverse Events Associated with Pediatric Complementary and Alternative Medicine	\$30,000	2008-02/2011-02 PI: Vohra S, Co-investigators: Yager J, Mior S, Humphreys K, Gross AR, Boon H.
Physiotherapy Foundation of Canada Alun Morgan Fund	Validation of a new prognostic tool for acute Whiplash-associated disorder	\$5000	2008/2009 Walton D, MacDermid J, Teasell R, Nielson W, Reese H, Levesque L, Nailor T, Toland J.
Agency for Healthcare Research and Quality (AHRQ)	Complementary and Alternative Therapies for Back Pain II.	\$249,905.10 USD	2008-08/2009-08 Task Order Leader: Furlan AD. Co-investigators: Santaguida P, Gagnier J, Gross AR, Ammendolia C, Cherkin D, Dryden T, Moher D.
Agency for Healthcare Research and Quality (AHRQ). Contract No. 290-02-0020. Gaithersburg, MD	Complementary and Alternative Medicine in Back Pain Utilization Report: A Systematic Review	\$195-690 USD	2007-08/2008-09 Task Order Leader: Santaguida L, Co-PI: Gross AR, Co-investigators: Gagnier J, Busse J, Bhandari M.
Neuro Group Inc	Proposal to Evaluate the Efficacy of the InterX5000 in	\$423,000	2006-08/2009-12 Triano J, Woodhouse L,

2015-04-07

	the Treatment of Chronic Neck and Shoulder Pain		Galea V, Injeyan HS, MacDermid J, McGregor M, Pierrynowski MR, Ruegg R, Teodoroczyk JA.
Hamilton Health Sciences Corporation	Upper limb function following mechanical neck disorder.	\$9,674	2004-01/2004-12 PI: Manto L, Co-investigators: Lee A, Galea V, Pierrynowski M, Gross AR, McDermid J, McLaughlin L.
Canadian Physiotherapy Association	Promoting effective manual therapy for patients with mechanical neck disorders.	\$1,000	2003-05/2004-04 PI: McPhee C, Co-Investigators: Galea V, Graham N, Gross AR, MacDermid J, McLaughlin L, Pierrynowski M
Physiotherapy Foundation of Canada,	The role of quantitative sensory testing in diagnosis and evaluation of mechanical neck disorders.	\$4,000	2003-07/2004-06 PI: MacDermid J, Co-investigators: Galea V, Gross AR, Graham N, Phee C, McLaughlin L, Pierrynowski M
Hamilton Hospital Assessment Centre	A pilot study to examine the test-retest reliability of a novel performance outcome measure, the neck-walk index, for patients with neck pain or stiffness	\$11,089	2003-06/2004-05 PI: Pierrynowski M, Co-investigators: Gross AR, MacDermid J, Galea V, McLaughlin L, McPhee C, Graham N
Hamilton Health Foundation	Development of an evaluation protocol for patients with mechanical neck disorders	\$9,674	2003-7/2004-06 PI: Manto L, Co-investigators: Lee A, Galea V, MacDermid J, Gross AR, Pierrynowski M, McLaughlin L, McPhee C, Graham N

Awards and Honors

Recipient	Recognition Type	Recognition Name	Organization	Effective Date	Amount	End Date	Currency
AR Gross	Honor	World Top 60 Expert on Neck Pain (ranking=5)	Expertscape	2014-07	-	-	-
D Walton	Honor	World Top 60 Expert on Neck Pain (ranking=23)	Expertscape	2014-07	-	-	-
J MacDermid	Honor	World Top 60 Expert on Neck Pain (ranking=25)	Expertscape	2014-07	-	-	-
AR Gross	Honor	Alumni Achievement Award for Physical Therapy	University of Toronto, Dept. Rehabilitation Sciences	2012-06	-	-	-
L Carlesso, T Jenkyn, J MacDermid, T Birmingham	Award	Canadian Academy of Manipulative Physiotherapy (CAMPT) Founders Fund	Physiotherapy Foundation Canada	2011-07	\$5,000	2012-06	CND
L Carlesso	Award	Award for Research Advancing Quality Care	College of Physiotherapists of Ontario	2011-06	\$5,000	-	CND
J MacDermid & J Cheung	Award	Mobility, musculoskeletal health & arthritis – Institute of Musculoskeletal Health and Arthritis (IMHA)	CIHR Undergraduate	2011-05	\$4,950	2011-08	CND

Recipient	Recognition Type	Recognition Name	Organization	Effective Date	Amount	End Date	Currency
AR Gross	Award	Basmajian Travel Award	McMaster University, School of Rehabilitation Sciences (SRS)	2010-10	\$200	2011-10	CND
AR Gross	Award	Basmajian Travel Award	McMaster University, School of Rehabilitation Sciences (SRS)	2010-10	\$200	-	CND
L Carlesso	Award	Frederick Banting and Charles Best Canada Graduate Scholarships	CIHR Doctoral Award	2010-09	\$105,000	2013-03	CND
L Carlesso, J MacDermid, L Santaguida, L.Thabane	Award	Alun Morgan Memorial Research Award in Orthopaedic Physiotherapy	Physiotherapy Foundation of Canada	2010-07	\$5,000	2011-06	CND
D Walton, A Lefebvre, C Richardson, D Reynolds, Y Eilon-Avigdor, M Wonderham (MCISc students in manipulation field at UWO)	Award	OrthoCanada Research Award in Neck and Back Rehabilitation and Core Stability	Physiotherapy Foundation Canada	2010-07	\$4,362.16	2011-06	CND
J MacDermid & J Cheung	Award	Undergraduate: Mobility, musculoskeletal health and arthritis	CIHR	2010-05	\$4,950	2010-08	CND

Recipient	Recognition Type	Recognition Name	Organization	Effective Date	Amount	End Date	Currency
L Carlesso	Award	Strategic training fellow in rehabilitation research	CIHR Institute of Musculoskeletal Health and Arthritis	2008-08	\$17,850	2010-08	CND
AR Gross	Distinction	Distinguished Lectureship on the Science of Manual Therapy	University of Illinois, Chicago, USA	2008-10	\$800	-	USD
D Walton	Award	Pain Research Award at the Pain, Mind and Movement II Symposium	Irish Pain Society	2008-08	-	-	-
AR Gross	Honor	OPA Research Award	Ontario Physiotherapy Association (OPA), Canadian Physiotherapy Association (CPA)	2008-06	-	-	-
AR Gross	Honor	Dianne Millette Fellowship Award	College of Physiotherapists of Ontario	2007-10	\$1500	-	CND
D Walton, J Garland, J MacDermid	Award	Fellowship	CIHR	2006-05	\$270,833	2011-04	CND
J MacDermid & A Teo	Award	Musculoskeletal Health, Summer Studentship	CIHR	2005-04	\$5,000	2005-08	CND
A Gross	Award	Basmajian Travel Award	McMaster University, SRS	2003-10	\$500	2004-10	CND

Unfunded Grants

UNFUNDED GRANTS			
Source	Title	Amount	Date of Submission
CIHR Operating Grant	Hands-on and hands-off approaches to therapeutic exercise in chronic neck pain: A mechanistic trial	\$481,574 CDN	2014-03 MacDermid JC, Goldsmith CH, Gross AR, Miller J, Pierrynowski M, Walton D
CIHR Operating Grant	“Hands-on” or “Hands-off”: A trial to optimize management of neck pain	\$469,174 CDN	2013-09 MacDermid JC, Goldsmith CH, Gross AR, Miller J, Pierrynowski M, Walton D
CIHR Operating Grant	Clinical and biological responses of people with neck pain being treated with a manual therapy intervention of varying duration and frequency for Acute WAD	\$1,063,441CN D	2012-09 PI: Pierrynowski MR, Co-Applicant: MacDermid J, Walton D, Gross AR, Goldsmith CH
NIH/CIHR - SF424 (R&R)	Manual Therapy Clinical Trial Grant 10972304	\$499,553USD	2012-07 PI: Pierrynowski MR, MacDermid J, Walton D, Gross AR, Goldsmith CH
Financial Services Commission of Ontario (FISCO)	RFP No. OSS 00144305 - Development of a Minor Injury Protocol	\$906,107	2011-01 PI: Santaguida L, Co-PI: Gross AR, MacDermid J; Walton D
CIHR-Operating Grant	Characterizing the Clinical and Biological Responses of Different Dosages of Exercise and Mobilization for Management of Whiplash-Associated Neck Pain	\$183,983	2009-09 PI: MacDermid J, Co-PI: Galea V, Goldsmith CH, Gross AR, Kumbhare D, Parkinson W, McLaughlin L, Pierrynowski M, Walton D, Woodhouse L
NIH/CIHR – biology in manual therapy National Centre for	Characterizing the magnitude and time course of biological responses in mild to moderate	\$273,879.20	2008-11 PI: MacDermid J, Co-PI: Pierrynowski

2015-04-07

Complementary and Alternative Medicine PAR06-312-1 R21	whiplash associated disorders as a basis for differentiating biological outcomes and predictors.		M, Gross AR, Dickey J, Goldsmith CH, Galea V, McLaughlin L, Parkinson W, Woodhouse L
CIHR – Knowledge to Action.	Development and implementation of a comprehensive and international clinical practice guideline for the management of mechanical neck disorders by Physical Therapists	\$196,462.	2008-05 PI: Santaguida L, MacDermid J, Gross AR Co-PI: Haines T, Goldsmith CH, Reid D, Westaway M
NIH - Biology of Manual Therapy, National Centre for Complementary and Alternative Medicine	Characterizing the magnitude and time course of biological responses in mild to moderate whiplash associated disorders as a basis for differentiating biological outcomes and predictors	\$295,789	2007-11 PI: MacDermid J, Pierrynowski M Co-PI: Gross AR, Dickey J, Goldsmith CH, Galea V, McLaughlin L, Parkinson W, Woodhouse L
CIHR	Biomechanical and neurophysiological foundations underlying complex musculoskeletal disorders affecting the neck and arm	\$234,057	2006-11 PI: Pierrynowski M
NIH/CIHR - Biology of Manual Therapy	Characterizing the magnitude and time course of biological responses in mild to moderate whiplash associated disorder. A basis for differentiating biological outcomes and predictors	\$24,943	2006-09 PI: MacDermid J, Dickey J, Woodhouse L Co-PI: Galea V, Pierrynowski M, Goldsmith CH, Gross AR, McLaughlin L, Kumbhare D, Parkinson W
CIHR, Invention – Tools, Techniques & Devices for Research and Health Care	The Neck-Walk Index, a novel performance outcome measure for patients with neck pain: Moving a laboratory tool to the clinical environment	\$100,669	2006-11 PI: Pierrynowski M, Co-I: MacDermid J, Gross AR, Galea V, McLaughlin L
Canadian Institutes of Health Research	Neurological conditions underlying complex disorders of the neck arm hand.	\$24,943	2005-09 PI: Galea V, Co-I: Jull G, Sterling, MacDermid J, Pierrynowski M, Gross

			AR
Workplace Safety & Insurance Board	Neurophysiological and biomechanical foundations underlying complex musculoskeletal disorders affecting the neck/arm	\$163,899	Submitted 2004-02 Pierrynowski M
The Physicians' Services Incorporated Foundation	Development of a measurement battery for neurological impairment in patients with neck pain	\$134,339	2004-01 PI: Khumbare D, Co-I: Parkinson B, Galea V, MacDermid J, Pierrynowski M, Gross AR
Research Advisory Council, Workplace Safety & Insurance Board	Reliability and criterion validity of quantitative sensory tests in patients with mechanical neck disorders	\$20,000	2003-06 PI: McDermid J, Co-I: Pierrynowski M, Galea V, Gross AR
Workplace Safety & Insurance Board	The role of quantitative sensory testing in diagnosis and evaluation of mechanical neck disorders	\$19,714.90	Submitted 2003-02 PI: Galea V

Peer-Reviewed Publications

2014

1. Walton DM, Lefebvre A, Reynolds D. The Brief Illness Perceptions Questionnaire identifies 3 classes of people seeking rehabilitation for mechanical neck pain. *Man Ther.* 2014 Nov 5. pii: S1356-689X(14)00197-0. doi: 10.1016/j.math.2014.10.015. [Epub ahead of print]
2. Uddin Z, MacDermid JC, Woodhouse LJ, Triano JJ, Galea V, Gross AR. The effect of pressure pain sensitivity and patient factors on self-reported pain-disability in patients with chronic neck pain. *Open Orthop J.* 2014 Sep 30;8:302-9. doi: 10.2174/1874325001408010302. eCollection 2014.
3. Elliott JM, Dewald JP, Hornby TG, Walton DM, Parrish TB. Mechanisms underlying chronic whiplash: contributions from an incomplete spinal cord injury? *Pain Med.* 2014 Nov;15(11):1938-44. doi: 10.1111/pme.12518. Epub 2014 Aug 19
4. Uddin Z, MacDermid JC, Galea V, Gross AR, Pierrynowski MR. The current perception threshold test differentiates categories of mechanical neck disorder. *J Orthop Sports Phys Ther.* 2014 Jul;44(7):532-C1. doi: 10.2519/jospt.2014.4691.
5. Rushton A., Rivett DR., Carlesso LC., Flynn T., Hing W., Kerry R. International Framework for Examination of the Cervical Region for Potential of Cervical Arterial Dysfunction Prior to

2015-04-07

Orthopaedic Manual Therapy Intervention. *Manual Therapy*. Man Ther. 2014 Jun;19(3):222-8. doi: 10.1016/j.math.2013.11.005. Epub 2013 Nov 23.

6. Walton DM, Levesque L, Payne M, Schick J. Clinical pressure pain threshold testing in neck pain: comparing protocols, responsiveness, and association with psychological variables. *Phys Ther*. 2014 Jun;94(6):827-37. doi: 10.2522/ptj.20130369. Epub 2014 Feb 20.
7. Walton DM, Eilon-Avigdor Y, Wonderham M, Wilk P. Exploring the clinical course of neck pain in physical therapy: a longitudinal study. *Arch Phys Med Rehabil*. 2014 Feb;95(2):303-8. doi: 10.1016/j.apmr.2013.09.004. Epub 2013 Sep 18. Funded by UWO Academic Development Fund small project grant.

2013

1. Carlesso LC., MacDermid JC., Santaguida PL., Thabane L. Determining adverse events in patients with neck pain receiving orthopaedic manual physiotherapy: a pilot and feasibility study. 2013, *Phys Can*. 65(3):255-265.
2. Elliott JM, Rademaker A, Parrish TB, Walton DM. Quantification of cervical spine muscle fat: a comparison between T1-weighted and multi-echo gradient echo imaging using a variable projection algorithm (VARPRO). *BMC Med Imaging*. 2013 Sep 11;13:30. doi: 10.1186/1471-2342-13-30.
3. Kumbhare D, Parkinson W. Influence of psychosocial factors on illness behavior. *American Academy of Physical Medicine & Rehabilitation – Knowledge Now*, In Press.
4. Walton DM, MacDermid JC, Russell E, Koren G, Van Uum S. Hair-normalized cortisol waking response as a novel biomarker of hypothalamic-pituitary-adrenal axis activity following acute trauma: a proof-of-concept study with pilot results. *Pain Research and Treatment* [Pain Res Treat](#). 2013;2013:876871. doi: 10.1155/2013/876871. Epub 2013 Dec 3.
5. Carlesso LC, MacDermid JC, Santaguida L, Thabane L: A survey of patient's perceptions of what is "adverse" in manual physiotherapy and predicting who is likely to say so. *J Clin Epidemiol*. 2013 Oct;66(10):1184-91. doi: 10.1016/j.jclinepi.2013.05.005. Epub 2013 Jul 12.
6. Carlesso LC, MacDermid JC, Santaguida L, Thabane L, Giulekas K, Larocque L, Millard J, Williams C, Miller J, Chesworth BM: Beliefs and Practice Patterns in Spinal Manipulation and Spinal Motion Palpation Reported by Canadian Manipulative Physiotherapists. *Physiotherapy Canada*, V65(2), 2013. 167-175. 10.3138/ptc.2012-11.
7. Constand M, MacDermid JC: Analysis of neck motion during Functional Tasks in People with or without neck pain. doi:10.1186/2052-1847-5-21 *BMC Sports Medicine and Arthroscopy* 5:21, 2013.
8. Walton DM, MacDermid JC. A brief 5-item version of the Neck Disability Index shows good psychometric properties (2013). *Health and Quality of Life Outcomes* 11:108. doi: 10.1186/1477-7525-11-108.

2015-04-07

9. Walton DM, Giorgianni AA, Mascarenhas JC, West SC, Zammit CA. Risk factors for persistent problems following acute whiplash injury: update of a systematic review and meta-analysis (2013). *Journal of Orthopedic and Sports Physical Therapy*. doi: 10.2519/jospt.2013.4507. Epub 2013 Jan 14, 2013;43(2): 31-43, 2013.
10. Walton DM, Elliot J. A higher-order analysis of the properties of the Tampa Scale for Kinesiophobia-11 item version in people with neck pain (2013). *Physical Therapy* 93:60-68.
11. Cheung J, Kajaks T, MacDermid JC. The Relationship between Neck Pain and Physical Activity. *The Open Orthopaedics Journal*, 7, 2013, (Suppl 4: M11): 521-529.
12. Uddin Z, MacDermid JC, Galea V, Gross AR, Pierrynowski M: Reliability and validity of current perception threshold test in mechanical neck disorder. *Value in Health*, Volume 16, Issue 3, Page A111, May 2013

2012

1. Carlesso L, Walton D, MacDermid J. Reflecting on Whiplash Associated Disorder Through a QoL Lens: An option to advance practice and research. *Disability and Rehabilitation, Disabil Rehabil*. 2012;34(13):1131-9. doi: 10.3109/09638288.2011.632467. Epub 2011 Nov 23.
2. Walton DM, Balsor B, Etruw E. Exploring the causes of neck pain and disability as perceived by those who experience the condition: a mixed-methods study. *ISRN Rehabilitation* vol. 2012, Article ID 971328, 7 pages, 2012. Doi:10.5402/2012/97138.
3. Galea V, Pierrynowski M, MacDermid JC, Gross AR: Upper Limb Neuromuscular Strategies are altered in Patients with Mechanical Neck Disorders compared to Asymptomatic Volunteers. DOI: 10.1615/CritRevPhysRehabilMed.2013006442 *Critical Reviews in Physical and Rehabilitation Medicine* 24:69-84, 2012.
4. Uddin Z, MacDermid JC, Galea V, Gross AR, Pierrynowski M. PMD3 Does Current Perception Threshold Test Can Differentiate Categories of Mechanical Neck Disorder? *Value in Health* 15 (4), A62.
5. Kumta P, MacDermid JC, Mehta S, Stratford P: The FIT-HaNSA Demonstrates Reliability and Convergent Validity of Functional Performance in Patients With Shoulder Disorders. *The Journal of Orthopaedic and Sports Physical Therapy* Epub Jan 25, 2012; 42(5):465-464, 2012.

2011

1. Jull GA, Söderlund A, Stemper BD, Kenardy J, Gross AR, Côté P, Treleaven J, Bogduk N, Sterling M, Curatolo M. Toward optimal early management after whiplash injury to lessen the rate of transition to chronicity: discussion paper 5. *Spine (Phila Pa 1976)*. 2011 Dec 1;36(25 Suppl):S335-42.

2. Carlesso LC, Cairney J, Dolovich L, Hoogenes J. Defining adverse events in orthopaedic manual therapy: a qualitative exploration of the patient perspective. *Manual Therapy* 2011. (epub)
3. Carlesso LC, Rivett DR. Manipulative Practice in the Cervical Spine: a survey of IFOMPT member countries. *Journal of Manual and Manipulative Therapy* 2011;19 (2) 66-70.
4. Walton DM, MacDermid JC, Nielson W, Teasell RW, Reese H, Levesque L. Pressure pain threshold testing demonstrates predictive ability in people with acute whiplash. *J Orthop Sports Phys Ther.* 2011;41(9):658-65. Epub 2011 Sep 1.
5. Walton DM, MacDermid JC, Nielson W, Teasell RW, Nailor T, Maheu P. A descriptive study of pressure pain threshold at 2 standardized sites in people with acute or subacute neck pain. *J Orthop Sports Phys Ther.* 2011;41(9):651-7. Epub 2011 Sep 1.
6. Walton DM, MacDermid JC, Nielson W, Teasell RW, Chiasson M, Brown L. Reliability, standard error, and minimum detectable change of clinical pressure pain threshold testing in people with and without acute neck pain. *J Orthop Sports Phys Ther.* 2011;41(9):644-50. Epub 2011 Sep 1.
7. Goldsmith CH, Gross AR, MacDermid J, Santaguida L, Miller J. What does the evidence tell us about design of future treatment trials for whiplash-associated disorders? *Spine* 2011;36(25S):S292-S302.

2010

1. Carlesso LC, Gross AR, Santaguida PL, Burnie S, Voth S, Sadi J. Adverse events associated with the use of cervical manipulation and mobilization for the treatment of neck pain in adults: A systematic review. *Man Ther.* 2010 Oct;15(5):434-44. Epub 2010 Mar 12. Available from: http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6WN0-4YKFNOC-1&_user=1067350&_coverDate=03%2F12%2F2010&_rdoc=1&_fmt=high&_orig=search&_sort=d&_docanchor=&_view=c&_acct=C000051241&_version=1&_urlVersion=0&_userid=1067350&md5=b27966d78b1600f1d0d3247ffe5b67ff
2. Carlesso LC, MacDermid JC, Santaguida L. Standardization of Adverse Event Terminology and Reporting in Orthopaedic Physical Therapy: Application to the Cervical Spine. *J Orthop Sports Phys Ther.* 2010 Aug;40(8):455-63. Available from: http://www.jospt.org/issues/id.2449/article_detail.asp
3. Teasell RW, McClure JA, Walton D, Pretty J, Salter K, Meyer M, Sequeira K, Death B. A research synthesis of therapeutic interventions for whiplash-associated disorder: part 1 - overview and summary. *Pain Res Manag.* 2010 Sep-Oct;15(5):287-94.
4. Teasell RW, McClure JA, Walton D, Pretty J, Salter K, Meyer M, Sequeira K, Death B. A research synthesis of therapeutic interventions for whiplash-associated disorder (WAD): part 2 - interventions for acute WAD. *Pain Res Manag.* 2010 Sep-Oct;15(5):295-304.

2015-04-07

5. Teasell RW, McClure JA, Walton D, Pretty J, Salter K, Meyer M, Sequeira K, Death B. A research synthesis of therapeutic interventions for whiplash-associated disorder (WAD): part 3 - interventions for subacute WAD. *Pain Res Manag.* 2010 Sep-Oct;15(5):305-12.
6. Teasell RW, McClure JA, Walton D, Pretty J, Salter K, Meyer M, Sequeira K, Death B. A research synthesis of therapeutic interventions for whiplash-associated disorder (WAD): part 4 - noninvasive interventions for chronic WAD. *Pain Res Manag.* 2010 Sep-Oct;15(5):313-22.
7. Teasell RW, McClure JA, Walton D, Pretty J, Salter K, Meyer M, Sequeira K, Death B. A research synthesis of therapeutic interventions for whiplash-associated disorder (WAD): part 5 - surgical and injection-based interventions for chronic WAD. *Pain Res Manag.* 2010 Sep-Oct;15(5):323-34.
8. Walton DM, MacDermid JC, Neilson W. Recovery from acute musculoskeletal injury of the spine: clinical, methodological and philosophical considerations. *Disabil Rehabil.* 2010; 32(10):864-74.

2009

1. MacDermid JC, Gross AR, Galea V, McLaughlin L, Parkinson W, Woodhouse L. Developing biologically-based clinical assessments for physical therapy management of neck pain. *The Journal of Orthopaedic and Sports Physical Therapy*, 2009;35(4):388-99.
2. MacDermid JC, Walton D, Avery S, Blanchard A, Etruw E, McAlpine C, Goldsmith CH. Measurement properties of the neck disability index: A systematic review. *Journal of Orthopaedic and Sports Physical Therapy*, 2009;39(5):400-17.
3. McLaughlin L. Breathing evaluation and retraining in manual therapy. *J Bodyw Mov Ther.* 2009 Jul;13(3):276-82.
4. Walton D. A review of the definitions of 'recovery' used in prognostic studies on whiplash using an ICF framework. *Disabil Rehabil.* 2009;31(12):943-57.
5. Walton D, MacDermid JC, Teasell R: Risk Factors for Persistent Problems Following Whiplash Injury: Results of a Systematic Review and Meta-analysis. *Journal of Orthopaedic and Sport Physical Therapy* 2009;39(5):334-50.

2008

1. Gross AR. HaNSA – Head and Neck, Shoulder & Arm Research Group. *Orthopaedic Division Review* 2008;March/April:23-7.
2. Walton DM, Sadi J. Identifying SLAP lesions: a meta-analysis of clinical tests and exercise in clinical reasoning. *Phys Ther Sport.* 2008 Nov;9(4):167-76.

2015-04-07

3. Walton DM, Sadi J. What is the best clinical test for identifying slap lesions of the shoulder? Results of a systematic review. *Physiotherapy* 2007;93(S1):S338.
4. Walton D, MacDermid JC, Nielson W, Teasell R: Prognostic factors after acute whiplash injury: results of a meta-analysis. Combined Sections, American Physical Therapy, Nashville, TN. February 8, 2008 Published in *Journal of Orthopaedic and Sports Physical Therapy*: 38(1): Suppl:A23, 2008.

2007

1. Carlesso LC, Bartlett DJ, Padfield B Chesworth BM. Cervical manipulation and informed consent: Canadian manipulative physiotherapists opinions on communicating risk. *Phys Can.* 2007;59(2):86-96.
2. MacDermid JC, Ghobrial M, Quirion KB, St-Amour M, Tsui T, Humphreys D, McCluskie J, Shewayhat E, Galea V. Validation of a new test that assesses functional performance of the upper extremity and neck (FIT-HaNSA) in patients with shoulder pathology. *BMC Musculoskeletal Disorders* 2007; 8:42 (17 May 2007). Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1892014/pdf/1471-2474-8-42.pdf>

2005

1. Pierrynowski MR, Gross AR, Galea V, Miles M, McLaughlin L, McPhee C. Comparison of the long-range power-law correlations obtained from bilateral stride and head bobbing intervals in asymptomatic volunteers. *Gait & Posture* 2005;22(1):46-50.

Book Chapters

Walton D, Gross A, MacDermid JC, Goldsmith C: Chapter 23 Clinical Trial Design Grieve's Modern Musculoskeletal Physiotherapy. (In progress, 2013-4).

MacDermid JC, Walton D: Nerve compression syndromes of the forearm. In Neck and Arm Pain Syndromes. In Fernández-de-las-Peñas C, Cleland JA, Huijbregts P: In Press Evidence-Informed Screening, Diagnosis, and Management in Physical Therapy, Elsevier, Chapter 29:370-380, 2011.

Submitted for Publications

a) Journal Articles

Carlesso LC, Yeung E, MacDermid JC. The future of neck manipulation as a treatment approach for Canadian manipulative physiotherapists in light of recent research and practice analyses. *Journal of Manual and Manipulative Therapeutics*. Submitted 2013.

Pierrynowski M, McPhee C, MacDermid JC, Gross A: Intra- and inter- rater reliability and construct and convergent validity of FitHaNSA in individuals with whiplash associated disorders. Submitted to *The Journal of Orthopaedic Sports Physical Therapy*.

2015-04-07

Published Abstracts

Journal Abstracts

2011

1. Carlesso L, Santaguida L, Gross AR, Burnie S. Profiling adverse events associated with the use of cervical manipulation or mobilization for the treatment of neck pain in adults: a systematic review. 2010 Combined Sections Meeting (CSM), San Diego, CA, 2010-02-17/20, 2010. JOSPT, 2010. 40(1): A23-4.
2. Carlesso, LC., Cairney JC., Dolovich L., Hoogenes, J. Defining adverse events in orthopaedic manual therapy: The patient perspective. Pain Research and Management. CPA Congress 2010 2011. 16(2), 116. Physiother Can. 2010 July; 62(Suppl 1): 46. A054. Published online 2010 July. doi: 10.3138/physio.62.supp.

2009

1. Soleyn JK, Pierrynowski MR, Gross AR, Galea V. Excellent Reliability for a Common Neck Proprioception Test is Achieved Using a Defined Protocol and Six Repetitions. Orthopaedic Review, CPA Congress, Calgary, AB, 2009.

2007

1. Morash J, Galea V, MacDermid J, Gross AR, Pierrynowski M. Neural strategies controlling the shoulder and arm during a high reach and grasp task in patients with mechanical neck disorders (MND). Orthopedic Division Review 2007;March/April:42.
2. Bradley LB, Galea V, Mac Dermid J, Gross AR, Pierrynowski MM. Upper limb function in patients with mechanical neck disorder: Joint kinematics. Orthopedic Division Review 2007;March/April:43.

2006

1. MacDermid JC, Galea V, Pierrynowski M, Gross AR, McLaughlin L. The relationship between quantitative sensory tests or electrophysiology and disability in patients with mechanical neck disorders. Orthopedic Division Review 2006;March/April:21.
2. Pierrynowski M, Galea V, MacDermid J, Gross AR, Khumbare D, Parkinson B, Teo A, Missiuna P, McLaughlin L, McPhee C, Graham N, Lee A, Marley T. The head and neck, shoulder, arm (HaNSA) research group conceptual framework. Orthopedic Division Review 2006;March/April:29.
3. Teo A, Galea V, MacDermid J, Gross AR, McLaughlin L, Pierrynowski M, The Head, and Neck, Shoulder, Arm Research Group (HaNSA). Performance of patients with mechanical neck

disorders on a reach and grasp task: coordination dynamics. Orthopedic Division Review 2006;March/April:34.

4. Galea V, Teo A, MacDermid J, Gross AR, McLaughlin L, Pierrynowski M, The Head, and Neck, Shoulder, Arm Research Group (HaNSA). Performance of patients with mechanical neck disorders on a reach and grasp task: neural strategies. Orthopedic Division Review 2006;March/April:35.
5. Pierrynowski MR, Gross AR, Galea V, Miles M, McLaughlin L, McPhee C. Reliability of the long-range power-law correlations obtained from bilateral stride and head bobbing intervals in asymptomatic volunteers. Gait & Posture, 22(1), 46-50, 2005.

Conference Presentations (Peer Reviewed) – PRESENTERS UNDERLINED

2015

1. Gross AR, Hing W, Thoomes E, Pool J, MacDermid J. Clinical Tracking for Cervical Radiculopathy: Diagnostic classification, management, outcome selection and benchmarking. World Confederation for Physical Therapy Congress, Singapore. May 3, 2015.

2013

1. Walton DM. Whiplash: Is there a lesion, and if so, where? (2013) Western University 2013 Motor Vehicle Safety Research Meeting, London ON, Canada
2. Walton DM. Helping clinicians make the invisible visible (2013). Grand Rounds, Northwestern University Physical Therapy Program, Chicago IL, United States.
3. Walton DM. Measure the experience of neck pain for prognosis and treatment decisions (2013). Evidence-Based solutions for improving cervical spine health and function conference, Chicago IL, United States.
4. Uddin Z, MacDermid JC, Galea V, Gross AR, Pierrynowski M: Reliability and validity of current perception threshold test in mechanical neck disorder (2012). ISPOR 17th Annual International Meeting- Washington, DC, June 2, 2012. Value in Health. 16(3):A111. doi: 10.1016/j.jval.2013.03.529. Epub 2013 May 3, 2013
5. Uddin Z, MacDermid JC, PhD, Galea V, Gross AR, Pierrynowski M: Does current perception threshold test differentiate categories of mechanical neck disorder? International Association Societies for Pain. Milan, Italy. August 30, 2012

2012

1. Carlesso LC., MacDermid JC., Santaguida L., Thabane L. A survey of patients perceptions of adverse events in manual physiotherapy: identifying the who, what, why, when, how and how long. IFOMPT World Congress – Quebec City October 2012, poster.

2015-04-07

2. Rushton A., Rivett DR., Carlesso LC., Flynn T., Hing W., Kerry R. Examination of the cervical region for potential of Cervical Arterial Dysfunction. IFOMPT World Congress – Quebec City October 2012, Focused Symposia.
3. Walton DM, Bostick G. Clinical Pain Assessment Part I: Pain intensity assessment: Pragmatic and Philosophical Considerations. Canadian Physiotherapy Association Teleconference Series October 2012.
4. Carlesso LC, MacDermid JC, Santaguida L, Thabane L. A survey of patients perceptions of Adverse events in manual physiotherapy: identifying the who, what, why, when, how and how long International Association for the Study of Pain World Congress August 2012– poster.

2011

1. Carlesso LC, Hoogenes J, Cairney JC, Dolovich L. Defining adverse events in orthopaedic manual therapy: The patient perspective. Canadian Pain Society conference, Niagara Falls, ON. 2011-04-13/16 (poster).
2. Chesworth BM, Carlesso LC, Guilekas K, Laroque L, Millard J, Williams C. Canadian manipulative physiotherapists Utilization of and Beliefs about Spinal Manipulation and Spinal Motion Palpation. World Conference of Physical Therapy, Amsterdam, Netherlands. 2011-06-20/23 (poster).
3. Gross AR, Goldsmith CH, MacDermid J, Santaguida L, Miller J. What does the evidence tell us about design of future treatment trials for whiplash-associated disorders? Whiplash 2011: How to lessen the transition to chronicity? Feb 19-20 2011, University of Queensland, Brisbane, Australia.

2010

1. Walton D, MacDermid J, Nielson W, Teasell R. Can we identify those people unlikely to recover from acute whiplash injury? A report on the development and initial validation of a new clinical screening tool. International Association for the Study of Pain Conference, Montreal, QC. 2010-09-29/09-02.
2. Carlesso, LC, Gross AR, Santaguida, PL, Burnie S, Voth S and Sadi J. Adverse events associated with cervical manipulation and mobilization in adults with neck pain: A systematic review. American Physical Therapy Association Combined Sections Meeting, San Diego, CA, 2010-02-19 (platform presentation).
3. Walton D, Levesque L, Reese H, MacDermid J, Nielson W, Teasell R. Prognosis following acute Whiplash Associated Disorders (WAD): Development, predictive validity, and application of a new clinical tool. American Academy of Orthopedic Manual Physical Therapists (AAOMPT) conference, San Antonio TX. 2010-10-06/10.

4. Carlesso LC, Cairney JC, Dolovich L, Hoogenes J. Defining adverse events in manual therapy: the patient perspective. Canadian Physiotherapy Association National Congress, St John's, NF. 2010-07-22/25 (platform presentation).
5. Levesque L, Maheu P, Walton D, The UWO Whiplash Rehabilitation Research Group. Reliability of a standardized physical assessment protocol for individuals with acute neck pain (poster). Canadian Physiotherapy Association National Congress, St John's, NF. 2010-07-22/25.
6. Mehta S, MacDermid JC, Carlesso L, McPhee: Concurrent Validation of the DASH and the QuickDASH in Comparison to Neck-specific Scales in Patients with Neck Pain. Spine Epub May 5; 35(24):2150-6, 2010.
7. Mehta S, MacDermid JC. Using QuickDASH in patients with Neck Pain: A Validity Study. International Federation for Societies of the Hand. Orlando, USA June 23, 2010.

2009

1. Carlesso LC, Gross AR, Santaguida PL, Burnie S, Voth S, Sadi J. Adverse events associated with the use of cervical manipulation and mobilization for the treatment of neck pain in adults: A systematic review. American Academy of Orthopaedic Manipulative Physical Therapists, Washington, DC. 2009-10-16/18 (poster).
2. Mehta S, MacDermid JC. Using QuickDASH in patients with neck pain: A Validity Study. Eastern Canada Health Outcome (ECHO) Measures Meeting, Montreal, PQ. 2009-06-09.
3. Soleyn JK, Pierrynowski MR, Gross AR, Galea V. Excellent reliability for a common neck proprioception test is achieved using a defined protocol and six repetitions. Canadian Physiotherapy Association National Congress, Calgary, AB. 2009-05-29 (poster).
4. Walton D, MacDermid J. A prognosis-based model of assessment and management of people with acute whiplash associated disorder. Canadian Physiotherapy Association National Congress, Calgary, AB. 2009-05-29 (workshop).
5. Walton D. Reliability of a standardized physical assessment protocol for individuals with acute neck pain. Canadian Physiotherapy Association National Congress, Calgary AB. 2009-05-29 (poster).
6. Walton D. A review of definitions of 'recovery' used in prognostic research on whiplash using an ICF framework. Canadian Physiotherapy Association National Congress, Calgary AB. 2009-05-29 (poster).
7. Levesque L, Reese R, Toland J, Nailer T, Walton D. Prognosis following acute WAD: Development of a new clinical tool. Canadian Physiotherapy Association National Congress, Calgary AB. 2009-05-29 (poster).

2015-04-07

8. Carlesso LC, Gross AR, Santaguida PL, Burnie S, Voth S, Sadi J. Adverse events associated with the use of cervical manipulation and mobilization for the treatment of neck pain in adults: A systematic review. American Physical Therapy Association Combined Sections Meeting, San Diego, CA. 2009-02-19.
9. MacDermid JC, Walton D, Avery S, Blanchard A, Etruw E, McAlpine C, Goldsmith C: Measurement properties of the neck disability index: A systematic review. Journal of Orthopaedic and Sports Physical Therapy 39(5):400-417, 2009.

2008

1. Walton D, Pretty J, MacDermid J, Teasell R (*oral*): Risk factors for persistent problems after whiplash: a meta-analysis. The World Congress on Neck Pain, San Francisco , CA, January 20-22 2008.
2. Walton D. A review of definitions of 'recovery' in prognostic studies on acute whiplash using an ICF framework. Irish Pain Society, Pain, Mind and Movement 2 Symposium, Dublin, Ireland. 2008-08-13/15.
3. McLaughlin L, Goldsmith CH. Is there a connection between non responsive neck or back pain patients and altered respiratory chemistry?: a case series. International Federation of Orthopaedic Manipulative Therapists (IFOMT) Symposium, Rotterdam, Netherlands. 2008-06-09/13. [Winner Best Interactive Poster Presentation]
4. Carlesso LC, Bartlett DJ, Padfield B Chesworth BM. Cervical manipulation and informed consent: Canadian manipulative physiotherapists opinions on communicating risk. IFOMT symposium, Rotterdam, Netherlands. 2008-06-09/13.
5. Rivett DR, Carlesso LC. Manipulative Practice in the Cervical Spine: A Survey of IFOMT member countries. IFOMT symposium, Rotterdam, Netherlands. 2008-06-09/13.
6. Rivett DR, Carlesso LC. Manipulative Practice in the Cervical Spine: A Survey of IFOMT member countries. 13th Annual Conference of the American Academy of Orthopaedic Manual Physical therapists, Seattle, WA. 2008-10-29/11-02 .
7. McLaughlin L. Incorporating the Fascial System into a Clinical Reasoning Framework. Orthopaedic Symposium, Canadian Physiotherapy Association, Montreal, PQ. 2008-09-26/28.
8. McLaughlin L, Goldsmith CH. Is There a Connection Between Non Responsive Neck or Back Pain Patients and Altered Respiratory Chemistry: a Case Series. Orthopaedic Symposium, Canadian Physiotherapy Association, Montreal PQ. 2008-09-26/28.
9. Walton DM, Pretty J, MacDermid J, Teasell R. Prognostic factors following acute whiplash: Results of a meta-analysis. American Physical Therapy Association Combined Sections Meeting, Nashville, TN. 2008-02-06/09.

2015-04-07

2007

1. Gross A, MacDermid JC, Galea V, Pierrynowski M, McLaughlin L, Goldsmith C, HaNSA: Conservative Management of Neck Disorders: The Current Evidence, Biological Foundations and Implications for Future Research. World Physical therapy Conference, Vancouver BC, June 7, 2007.

2006

1. MacDermid J, The Neck Disability Index. Invited presentation, Workers Compensation Board/University of Saskatchewan. Saskatoon, Sask. May 2006.
2. Morash J, Galea V, MacDermid J, Gross AR, Pierrynowski M, Neural strategies controlling the shoulder and arm during a high reach and grasp task in patients with mechanical neck disorder, 2006 Orthopaedic Symposium, Peak Performance: The Power of the Thoracic Spine, Calgary, AB. 2006-10-13/15.
3. Bradley LB, Galea V, MacDermid J, Gross AR, Pierrynowski M, Upper limb function in patients with mechanical neck disorder: joint kinematics, 2006 Orthopaedic Symposium, Peak Performance: The Power of the Thoracic Spine, Calgary, AB. 2006-10-13/15.
4. MacDermid JC, Galea V, Pierrynowski M, Gross AR, McLaughlin L. The relationship between quantitative sensory tests or electrophysiology and disability in patients with mechanical neck disorders. Orthopaedic Symposium, London, ON. 2005-10-28. Orthopedic Division Review March/April:21, 2006.
5. Carlesso LC, Barlett DJ, Padfield B, Chesworth BM. Cervical Manipulation and Informed Consent: Canadian Manipulative Physiotherapists' Opinions on Communicating Risk. CPA Congress, St. John NB. 2006-06-30/07-02.

2005

1. Galea V, Teo A, MacDermid J, Gross A, McLaughlin L, Pierrynowski M, The Head, and Neck, Shoulder, Arm Research Group (HaNSA). Performance of patients with mechanical neck disorders on a reach and grasp task: neural strategies.. Orthopaedic Symposium, London, Ontario, October 28, 2005. Orthopedic Division Review March/April:21, 2006.
2. Gross AR. Evidence-based Clinical Practice Guidelines: A clinical "routine" for managing mechanical neck disorders. Keynote Address to: The Changing Face of Physiotherapy, 2005 Orthopaedic Symposium, Canadian Physiotherapy Association, London, ON. 2005-10-28/30.
3. Hodges P, McLaughlin L, Souvlis T and Coppieters MW. What are the effects of contraction, muscle lengthening and compression on experimentally induced pain? The Changing Face of Physiotherapy, 2005 Orthopaedic Symposium, Canadian Physiotherapy Association, London, ON. 2005-10-28/30.

2015-04-07

4. Pierrynowski M, Gross AR, Galea V, MacDermid J, McLaughlin L, Graham N, Kumbhare D and Parkinson W. Sensitivity of the Neck-Walk Index to detect change in patients with mechanical neck disorders. The Changing Face of Physiotherapy, 2005 Orthopaedic Symposium, Canadian Physiotherapy Association, London, ON. 2005-10-28/30.
5. MacDermid J, Galea V, Pierrynowski M, Gross AR and McLaughlin L. The relationship between quantitative sensory tests or electrophysiology and disability in patients with mechanical neck disorders. The Changing Face of Physiotherapy, 2005 Orthopaedic Symposium, Canadian Physiotherapy Association, London, ON. 2005-10-28/30.
6. Pierrynowski M, Galea V, MacDermid J, Gross AR, Kumbhare D, Parkinson W, Teo A, Missiuna P, McLaughlin L, McPhee C, Graham N, Lee A and Marley T. The head and neck, shoulder, arm research group conceptual framework. The Changing Face of Physiotherapy, 2005 Orthopaedic Symposium, Canadian Physiotherapy Association, London, ON. 2005-10-28/30.
7. Teo A, Galea V, MacDermid J, Gross AR, McLaughlin L and Pierrynowski M. Performance of patients with mechanical neck disorder on a reach and grasp task: neural strategies. The Changing Face of Physiotherapy, 2005 Orthopaedic Symposium, Canadian Physiotherapy Association, London, ON. 2005-10-28/30.
8. Teo A, Galea V, MacDermid J, Gross AR, McLaughlin L and Pierrynowski M. Performance of patients with mechanical neck disorder on a reach and grasp task: coordination dynamics. The Changing Face of Physiotherapy, 2005 Orthopaedic Symposium, Canadian Physiotherapy Association, London, ON. 2005-10-28/30.
9. McLaughlin L, Popelas C. Use of capnography to restore normal breathing in the orthopaedic caseload. The Changing Face of Physiotherapy, 2005 Orthopaedic Symposium, Canadian Physiotherapy Association, London, ON. 2005-10-28/30.
10. Carlesso LC, Barlett DJ, Padfield B, Chesworth BM. Obtaining Expert Opinion from Canadian Manipulative Physiotherapists on Communicating Risk Cervical Manipulation When Seeking Informed Consent. Ortho symposium, London, ON. 2005-10-28/30.

2004

1. Pierrynowski M, Kumbhare D, Galea V, Gross AR, MacDermid J, McLaughlin L, HaNSA. The Neck-Walk Index: A new performance outcome measure that identifies patients with neck pain or stiffness. 65th Annual Assembly of the American Academy of Physical Medicine & Rehabilitation, Phoenix, AZ. 2004-10-07/10.
2. MacDermid J. Differentiating WAD II and WAD III on the basis of symptoms and sensorimotor function. Canadian Physiotherapy Association - Orthopaedic Division 16th Annual National Symposium, St. John's, NF. 2004-09-11/12.

2015-04-07

3. McLaughlin L. The impact of proximal positioning on pain perception: A clinician's journey to the research lab. Canadian Physiotherapy Association - Orthopaedic Division 16th Annual National Symposium, St. John's, NF. 2004-09-11/12..
4. Guy S, McDowell J, Ruttan P, Stevenson B, Turner L, Vair R, Gross AR and HaNSA. The Neck-Walk Index identifies patients with mechanical neck disorders, 8th International Federation of Orthopaedic Manual Therapists Conference, Cape Town, South Africa. 2004-03-21/26.
5. Buck S, Cheung G, Lundquist L, Tang B, Zavitz K, Gross AR and HaNSA. Upper limb function in patients with mechanical neck disorders, 8th International Federation of Orthopaedic Manual Therapists Conference, Cape Town, South Africa. 2004-03-21/26.
6. Galea V and HaNSA. Implications of mechanical neck disorder on motor control of the arm and hand. Is this a problem with disruptions in coordination? Occupational Therapy Physiotherapy Symposium Ergotherapie Physiotherapie, McMaster University, Hamilton ON. 2004-01-16/18.

2003

1. Pierrynowski M, Galea V, Graham N, Gross AR, Kumbhare D, MacDermid J, Manto L, McLaughlin L, McPhee C, Parkinson W. A new performance outcome measure, the Neck-Walk Index, to classify patients with neck pain or stiffness. Achieving Excellence Through Collaboration Conference, Sponsored by the Insurance Bureau of Canada and the Workplace Safety & Insurance Board, Toronto, ON. 2003-09-13.
2. Galea V and HaNSA. Implications of mechanical neck disorder on motor control of the arm and hand. Invited presentation, Canadian Physiotherapy Association Orthopaedic Division 2003 Symposium "Research and Practice: Making It Fit". Victoria, BC. 2003-10-25/26.
3. Pierrynowski MR, Galea V, Gross AR and HaNSA. The Head and Neck, Shoulder & Arm Special Interest Group: History and Present Status, School of Rehabilitation Science Research Rounds, Hamilton, ON. 2003-11-26.

Platform Presentation

2007

Morash J, Galea V, MacDermid J, Gross AR, Pierrynowski M. Neural strategies controlling the shoulder and arm during high reach and grasp task in patients with mechanical neck disorder. Motor Control. 2007;11(Suppl):S221. Progress in Motor Control VI, Brazil. August 9-12, 2007

Gross AR, MacDermid J, Galea V, Goldsmith CH, McLaughlin L. Conservative Management of Neck Disorders: The Current Evidence, Biological Foundations and Implications for Future Research. 15th International World Conference Physical Therapy Congress, Vancouver BC, 2007-06-02/06. Session: Workshop 2007-06-06 13:45. (Session chair and presenter).

2015-04-07

KNOWLEDGE TRANSLATION RESOURCES/PRODUCTS

1. Type of KT: Patient Decision Aid for Cervical Manipulation

Group serviced: Clinicians

Deliverable: PDA located at multiple sites including Physiopedia

Website: [http://www.physio-pedia.com/Neck Pain Patient Decision Aid: Step 6](http://www.physio-pedia.com/Neck_Pain_Patient_Decision_Aid:_Step_6)

Dates: developed in 2010 – ongoing delivery

Activity description: Jordan Miller, Anita R. Gross, Joy MacDermid integrated evidence on neck pain in a decision aid that would assist in making decisions about care.

2. Type of KT: Neck Care Tool-kit

Group serviced: Clinicians

Deliverable: Toolkit located at multiple sites including Physiopedia

Website: [http://www.physio-pedia.com/Neck Pain Tool-kit: Step 1](http://www.physio-pedia.com/Neck_Pain_Tool-kit:_Step_1)

Dates: developed in 2010 – ongoing updates in progress

Activity description: Jordan Miller, Anita R. Gross, Joy MacDermid integrated evidence on neck pain in a decision aid that would assist in making decisions about care.

3. Type of KT: Orthopedic Clinical Practice Guidelines

Group serviced: Clinicians (Physical Therapy)

Deliverable: Clinical Practice Guidelines

Evidence of uptake: these are now published by the Journal of Orthopedic and Sports Physical Therapy; and have been approved by the Orthopedic Division and the American Physical Therapy Association has practice standards. Guidelines developed to include for neck pain, Achilles tendinitis, knee pain, shoulder disorders.

Source/citation: <http://guideline.gov/browse/by-organization.aspx?orgid=2144>

Dates: Published and aired July 20, 2012.

Activity description: Joy MacDermid is a member of the steering group (and a lead for the upper extremity section) for developing a process and overseeing the development of guidelines for physical therapy management of musculoskeletal conditions using the most recent evidence; and An International Classification of Functioning Disability and Health perspective.

Student Projects

ACADEMIC MASTERS (MSc) & UNDERGRADUATE (BHSc) PROGRAM			
Year	Students	University	Role
2013	Thakker H (MSc)	McMaster University, RS	Title: Cross-cultural validation of the ND-10 into Hindi and prevalence of neck pain within a university setting Supervisor: J MacDermid
2011	Cheung J (BHSc)	McMaster University	Fear of movement and its relationship to physical activity in patients with neck pain Supervisor: J MacDermid
2011	Constand M (BHSc)	McMaster University	Analysis of neck range of motion of individuals with neck pain

2015-04-07

			Supervisor: J MacDermid
2010	Cheung J (BHSc)	McMaster University	The relationship between neck pain and physical activity
			Supervisor: J MacDermid
2006	Kumta P (MSc)	McMaster University, RS	Reliability and validity of the FIT-HanSA in patients with shoulder pathology
			Supervisor: J MacDermid
2005	Teo A Senior Research Project (BHSc)	McMaster University	Upper limb coordination of patients with Mechanical Neck Disorder on a reach and grasp task
			Supervisor: J MacDermid

CLINICAL MASTERS (MSc)			
Year	Students	University	Role
2010	Craig JD, Hodgins AP, Kapteyn M, Thomas KJ (MSc)	McMaster University, Physical Therapy	The inter-rater and intra-rater reliability of capnography based on varied levels of training Supervisors: LM McLaughlin and CH Goldsmith
2010	Lay M, Sears, J, Talbot K, Wylie C (MSc)	McMaster University, Physical Therapy	Reliability and validity of pain threshold and pain tolerance testing in neck patients Supervisor: J MacDermid
2009	Baker L, Hosseinpour S, Jones PC, Ryder HH, Vandenberg A (MSc)	McMaster University, Physical Therapy	Investigating the Inter-rater and Intra-rater Reliability of Capnography Supervisors: LM McLaughlin and CH Goldsmith
2006	Avery S, Blanchard A, Etruw E, McAlpine C (MSc)	University of Western Ontario, Physical Therapy	The psychometric properties of the Neck Disability Index: A systematic review Supervisor: J MacDermid
2006	Klyne L, Weiss A, Sommerfeldt S (MSc)	McMaster University, Physical Therapy	The concurrent validity of hand-held dynamometer as a measure of neck strength Supervisor: J MacDermid
2005	Aboelela O, Fried T, Lorusso C, Yu L (MSc)	McMaster University, (PT) Program	Does the neck-walk index differentiate patients with shoulder pain from patients with a mechanical neck disorder? A student pilot study. Senior Research project Supervisor: M. Pierrynowski
2005	Bridgelal N, Rich S, Richardson J (MSc)	McMaster University, Physical Therapy	Cold intolerance testing in patients with neck pain Supervisor: J MacDermid
2005	Cherry S, Gorny J, Gottschalk J, Hoag B, Kazun P, St.Michael J (MSc)	McMaster University, (PT) Program	Relationship between head and upper limb coordination in individuals with a mechanical neck disorder Supervisor: V Galea
2005	Quirion K, Ghobrial M, St-Amour M, Tsui T (MSc)	McMaster University, (PT) Program	Shoulder-five: A functional test for shoulder pathology Supervisor: J MacDermid

2004	Chunara S, Cooper D, Kappes R, Murphy P (MSc)	McMaster University, (PT) Program	Sensitivity of the Neck-Walk Index to detect change in patients with mechanical neck disorders. A student pilot study Supervisor: M Pierrynowski
2003	Buck S, Cheung G, Lundquist L, Tang B, Zavitz K. (MSc)	McMaster University, (PT) Program	Impairment of upper limb function in patients with a mechanical neck disorder Supervisor: V Galea
2003	Guy S, McDowell J, Ruttan P, Stevenson B, Turner L, Vair R (MSc)	McMaster University, (PT) Program	Can the variability in the Neck-walk Index score discriminate between patients with mechanical neck disorders and asymptomatic individuals? Supervisor: M Pierrynowski
2002	Dosen R, Rajah S (MCHC)	McMaster University, (PT) Program	Reliability of head bobbing motion in patients with mechanical neck disorders Supervisor: M. Pierrynowski

HaNSA is a transdisciplinary team of clinical scientists with expertise in orthopedic manual therapy, physical medicine & rehabilitation, surgery, clinical epidemiology, psychology, statistics, and movement analysis who meet frequently to discuss clinical issues pertaining to the epidemiology, costs, risk factors, prevention, and treatment of patients and workers with neck disorders with associated disability. Through research, clinical practice and education our mission is to serve patients with neck disorders by promoting and delivering effective therapy. As members of HaNSA, we are all committed to fulfilling our mission with caring and excellence. Below find a brief biographical sketch of the HaNSA members (in alphabetical order).

Lisa Carlesso, PT, PhD. Lisa is a physiotherapist and epidemiologist. As a clinician she has advanced certification in manual and manipulative therapy and teaches in the Canadian Physiotherapy Association's orthopaedic division post professional education program. Lisa also sits on national and international committees concerned with the advancement and promotion of manual therapy education. Her research interests are aimed at understanding musculoskeletal pain and disability through approaches that improve prognosis, risk and treatment responses for MSK conditions, in particular spinal conditions.

Charlie Goldsmith (cgoldsmi@sfu.ca), BSc MSc PhD. Charlie is the Maureen and Milan Ilich\Merck Chair in Statistics for Arthritis and Musculoskeletal Diseases at Simon Fraser University (SFU) and the Arthritis Research Centre of Canada. Charlie received his BSc and MSc degrees in Statistics from the University of Manitoba in Winnipeg. He was one of the first graduates of the Masters program in Statistics at that University. After teaching at Carleton University for two years, he went down to North Carolina and received his PhD in Experimental Design with a minor in Mathematical Statistics at North Carolina State University in Raleigh NC. He returned to Canada when McMaster started its Medical School and was there for most of his career. He is currently Emeritus Professor of Biostatistics in the Department of Clinical Epidemiology and Biostatistics at McMaster University. He has been involved in a variety of studies related to musculoskeletal conditions, most recently the Cervical Overview Group, the Cochrane Collaboration at McMaster University, developing outcome instruments, carrying out randomized trials, and a variety of interventions related to rheumatology, occupational therapy, physical therapy, chiropractic, surgery, and a variety of other disciplines where his expertise in designing, carrying out and publishing randomized controlled trials has been used extensively. He brings to the HaNSA Group abilities in quality improvement, experimental design, study design, and strategies for obtaining funding from peer-reviewed granting agencies. He has over 270 peer-reviewed publications and over 280 peer-reviewed abstracts, has presented his research findings on the collaborative studies all over the world, and helped train a variety of Masters and Doctoral students in the Health Research Methodology Program at McMaster University. He is currently in the Faculty of Health Sciences at SFU in Burnaby, BC and the Arthritis Research Centre of Canada in Vancouver, BC.

Nadine Graham, BA, BHSc (PT), MSc. Nadine received degrees from Wilfred Laurier University and McMaster University in the field of Physical Education, Physiotherapy, and Rehabilitation Science, respectively. She is an Assistant Clinical Professor in the School of Rehabilitation Science, Physiotherapy Program at McMaster University. Nadine is a clinician, educator and researcher.

She is a member of the Cervical Overview Group, Cochrane Collaboration with McMaster University. Nadine is also a clinical partner with HaNSA Research Group, McMaster University.

Anita Gross (grossa@mcmaster.ca), BSc (PT), MSc. Anita received degrees from the University of Toronto in the field of Physiotherapy, Curtin University in the field of Manipulation Therapy, and McMaster University in Design, Measurement and Evaluation. Anita is a clinician, researcher, and educator. She is an Associate Clinical Professor at McMaster University and lecturer in advance orthopaedic manipulative physical therapy for University of Western Ontario and the Canadian Physiotherapy Association. She coordinates the Cervical Overview Group, a group that conducts and maintains systematic reviews for the Cochrane Collaboration on neck pain. She chairs the Head and Neck, Arm, Hand (HaNSA) Research Group at McMaster University, School of Rehabilitation Sciences. Her most recent projects relate to International Collaboration on Neck (ICON) project – a multidisciplinary group who are synthesizing evidence about the management of neck pain including practice patterns and opinions from various health disciplines. She has over 80 peer reviewed publications and has been an invited speaker at a number of international conferences.

Margaret Lomotan (lomotam@mcmaster.ca), BA. Margaret received her degree in Psychology at McMaster University. Margaret coordinates the HaNSA research studies' recruitment, data collection and database management, as well as provides assistance in the preparation of ethics applications, posters, abstracts, manuscripts and grants.

Joy MacDermid (macderj@mcmaster.ca), BAHS (PT), PhD. Joy is a physical therapist, hand therapist and epidemiologist with clinical expertise in upper extremity therapy and a research program focused on impairment and disability issues affecting the upper limb. She is a Professor and Assistant Dean at the School of Rehabilitation Science at McMaster University, as well as Co-director of the Clinical Research Lab within the Hand and Upper Limb Centre (HULC) at the University of Western Ontario. Collaborative research between clinicians and researchers at HULC and McMaster are in progress. Joy's research interests include: upper extremity outcome studies and randomised clinical trials; psychometrics of clinical measurement, i.e., instrument development, reliability, validity, responsiveness; clinical epidemiology; practice surveys, clinical practice guidelines, computerized evaluation systems and evaluation of upper extremity impairment.

Laurie McLaughlin (laurie@proactivehealth.ca), DScPT, FCAMT, MCPA. Laurie graduated from McMaster University and received her Advanced Diploma of Manual and Manipulative Physiotherapy from the Canadian Physiotherapy Association with distinction in 1988. She has developed and taught continuing education manual therapy courses in Canada since 1987, joined the North American Institute of Orthopaedic Manual Therapy (NAIOMT) faculty in the United States in 1992 and more recently has taught courses in Europe and Australia. Her areas of interest include Spinal Manipulation, Manual Therapy for the Fascial System and Breathing Evaluation and Retraining. Since 1992 she has been a national examiner for physiotherapists specializing in orthopaedics for the North American Institute of Orthopedic Manual Therapy (NAIOMT) and in Canada serving as a Chief Examiner for Canada from 1999 to 2005. Laurie completed a Doctor of Science in Physical Therapy at Andrews University in Michigan in 2007 and is a member of the HaNSA (Head and Neck, Shoulder, Arm) research team at McMaster University. She is a Clinical

Assistant Professor at McMaster University, works as an Advanced Practice Physiotherapist, and is the President of M+D ProHealth.

Colleen McPhee, BA, BSc (PT), MSc, FCAMPT. Colleen is a graduate of the University of Western Ontario where she earned a Bachelor of Arts degree (Hons) in Physical Education and a Bachelor of Science degree in Physical Therapy. Since graduation Colleen has enjoyed working as a physiotherapist in the private clinical setting with an orthopaedic population. She currently works at the David Braley Sports Medicine and Rehabilitation Clinic at McMaster University in Hamilton, ON. Colleen has continued with postgraduate studies in the areas of acupuncture, vestibular rehabilitation and manual therapy. She successfully completed Level One exams with the Acupuncture Foundation of Canada and is a Fellow of the Canadian Academy of Manual Physical Therapists having obtained a Certificate of Advanced Manual and Manipulative Therapy. She recently graduated with a MSc in Rehabilitation Science from McMaster University. Her thesis focused on the psychometric properties of an upper extremity functional test, the FIT-HaNSA test, in a whiplash population.

Jordan Miller, BSc, MSc (PT). Jordan received a Master of Science degree in Physiotherapy and Bachelor of Science degree in Kinesiology from McMaster University. His clinical interests include the treatment of acute to chronic musculoskeletal pain and disability. His research interests include investigating the effectiveness of treatment strategies for pain and disability, and translating this knowledge to patients and health care practitioners. Jordan is a clinician and researcher who is a member of the Cervical Overview Group and a partner with the HaNSA Research Group at McMaster University.

Paul Missiuna (missiunp@mcmaster.ca), MD, FRCS(C). Paul is an orthopaedic surgeon with an interest in paediatrics and spine surgery. He also has a special interest in advancing imaging methods (MRI, fMRI, PET, CT) to identify structural alterations that are potentially the root cause of mechanical neck disorder. Dr Missiuna is in private practice and has hospital privileges at St. Joseph's Healthcare Hamilton in Hamilton, ON.

William Parkinson, PhD. Bill is a psychologist, registered in Ontario with specialization in rehabilitation. His strong methodological skills have allowed him to co-ordinate large-scale clinical trials in chronic pain. Dr. Parkinson has a private practice and works with the St. Joseph's Centre for Acute Injury Rehabilitation.

Michael Pierrynowski (pierryn@mcmaster.ca), PhD. Michael received degrees from the University of Waterloo and Simon Fraser in the field of Biomechanics. He is an Associate Professor in the Schools of Rehabilitation Science and Kinesiology, both at McMaster University. Michael "teaches" research skills, biomechanics, and applied anatomy to the occupational therapy and physiotherapy students, and directly supervises PhD and MSc students. In addition, Michael is co-director of the Human Movement Laboratory that examines pathological and normal motion. Recent work emphasizes the need for directional statistical tools to interpret ankle, knee, spine, and neck biomechanical data. Michael's research work is recognized, has been an invited keynote speaker at national and international conferences, and is a consulting editor of the Journal of Biomechanics.

P. Lina Santaguida(santag@mcmaster.ca), PT, PhD. Lina is the Associate Editor of the McMaster University Evidence-based Practice Centre and an Assistant Professor within Clinical Epidemiology and Biostatistics and an Associate member with the School of Rehabilitation Sciences. She led a number of systematic reviews and practice guidelines funded by the Agency for Health Research and Quality (AHRQ), Canadian Institute of Health Research (CIHR), American Association of Neurological Surgeons (AANS), Ontario Ministry of Health and Long-term Care (MOHLTC), Canadian Agency for Drugs and Technology in Health (CADTH). She is a member of the Cervical Overview Group, within Cochrane, which evaluates a variety of treatments for neck disorders. Her research interests include research methods related to evidence synthesis (systematic reviews and clinical practice guidelines (CPGs)), musculoskeletal injury and disability, use of technology to mitigate functional disabilities, and the development of CPGs. She teaches graduate students in research methods, and systematic reviews. She has over 50 publications primarily related to evidence synthesis.

Geoff Schneider (gmschnei@ucalgary.ca), PT, DSc, FCAMPT. Geoff is a clinician at LifeMark Physiotherapy at Springborough and the Advanced Spinal Care Centre (EFW Radiology) Calgary, Alberta. Following completion of his Bachelor of Health Science in Physiotherapy from McMaster University, Geoff completed his Fellowship in Manual and Manipulative Therapy (FCAMPT) in 2002. He also became certified in GunnIMS in the same year. Since 2004, Geoff has fulfilled the role of clinical education and rehabilitation research coordinator for LifeMark Health. Geoff completed his doctoral studies (DSc) from Andrews University. His research involved cervical spine facet joint mediated pain and its effect on sensory hypersensitivity in chronic whiplash patients. He has presented at numerous conferences and clinical rounds, published in peer-reviewed journals, and has taught post-graduate courses across Canada. He is a co-developer and instructor of a modular based, evidence-based course in the management of whiplash associated disorders. Geoff has a strong interest in clinical epidemiology, in particular diagnostic accuracy in cervical spine disorders. As a result he is currently pursuing further doctoral studies, a PhD, at the University of Calgary in the Faculty of Medicine. His research involves the derivation of a clinical prediction guide in the diagnosis of facet joint mediated pain in the cervical spine. Geoff has been awarded a CIHR doctoral research award Canada Graduate Scholarship. Geoff is an instructor in the DSc program at Andrews University, and his teaching duties include a course on translating research methodology and evidence-based orthopaedic manual therapy into clinical practice.

Dave Walton (dwalton5@uwo.ca), PT, PhD, FCAMT is an Assistant Professor with the School of Physical Therapy at the University of Western Ontario. His primary teaching duties are in the area of pain education for the entry-level physiotherapy professional program and advanced models for understanding orthopedic manual and manipulative therapy in the Master's of Clinical Science (manipulative therapy) post-graduate program. Dave is a Fellow of the Canadian Academy of Manipulative Therapy (FCAMT) and has 10 years of clinical experience in outpatient orthopedic physiotherapy. His research interests are varied, but all focus on understanding and improving health and quality of life in people with orthopedic musculoskeletal pain problems. His primary foci are in predicting and alleviating chronic pain and disability, and understanding and defining the process of recovery from acute and chronic injury, most notably traumatic injuries of the neck and low back. He also has a special interest in pedagogy and knowledge translation, is a two-time

winner of the Faculty of Health Sciences Teaching Award of Excellence, and is a certified facilitator for the Instructional Skills Workshop (ISW) teaching enrichment program offered at several Canadian universities. Dave is a co-founder, the current newsletter editor and chair-elect of the Pain Science Division of the Canadian Physiotherapy Association.