



NEWSLETTER

Issue 9 - November 2021

<https://www.carlresearchfellows.org/>

Building a strong future for Chiropractic research by Eric Roseen

Earlier this month I attended the International Forum for Back and Neck Pain Research in Primary Care. This multi-disciplinary meeting is a venue where some of the best science is shared, and it is always extremely relevant to my work as a back pain researcher in a department of family medicine. Although I've only been a few times before, I really look forward to this meeting. This forum had previously been scheduled as an in-person meeting in Sydney, Australia, then delayed, then moved to a virtual platform, Virbela. Such are the times.

Many of you may recognize Virbela as the platform used to host CARLoquium earlier this year. The CARL cohorts were well represented at the Back and Neck Pain Forum. As I uploaded my slides I saw that if I should have questions about my presentation I was to email Aron Downie, a CARL II fellow. As I re-oriented myself to Virbela the night before the conference I bumped into CARL fellows working hard to put the final touches on this virtual world. Many of the CARL I and II fellows had posters or podium presentations. I had reviewed abstracts for the meeting weeks earlier. In academia, particularly when starting out, it can feel like you don't belong. See "imposter syndrome". It is empowering to go to a prestigious international meeting and see familiar faces (albeit avatar faces). Confidence is built through this type of experience.

To me, this experience captured one of the hard to measure benefits of the CARL II program. It reflects the importance of the CARL network to support emerging researchers, and ultimately build research capacity in the chiropractic profession.

I'd also like to highlight the efforts of the CARL II Fellows. The CARL research working groups continue to coalesce (See Ongoing CARL Projects, page 6). Amidst challenging times, this inspiring and resilient group continues to grow together and push forward. We have been busy. Since our last newsletter (in March) CARL Fellows have contributed to over 50 new manuscripts. Articles have been published in high impact journals such as JAMA Internal Medicine, Journal of General Internal Medicine, PAIN, Scientific Reports and many more. The research of CARL II fellows has been disseminated at various national and international research conference and numerous invited talks.

As 2021 comes to a close, we approach 2022 with optimism. We hope you can attend the second CARLoquium, to be held March 1-2, 2022 on Virbela. We eagerly look forward meeting each other in person at the first in-person CARL residential tentatively scheduled for later this year in Denmark.

Highlights

For more information and bio's on the Cohort, visit our website:
www.carlresearchfellows.org/

CARLoquium 2022
dates: **1st-2nd March 2022**

Congratulations to Amy for her appointment at AECC, UK!

Congratulations to Sasha for her new position at Murdoch, Aus!

Congratulations to Ken for being named American Chiropractic Association's Researcher of the Year 2021!

Congratulations to Casper for being awarded the New Investigator award at WFC 2021!

In times of adversity: Amazing CARL II cohort

By Jon Adams, Greg Kawchuk and Jan Hartvigsen

All over the world academics and academic freedom are under pressure. Post-COVID academic jobs are being cut by the thousands worldwide, and for most of those who keep their jobs in universities and academic institutions, teaching loads are increasing and time for research even more limited. Despite these challenges, this Newsletter is testimony to the resilience and talent of the CARL II cohort. The Fellows continue to publish high-quality, relevant papers in good journals together and individually. They continue to lead new projects dealing with gender issues in chiropractic academia, MSK problems in older people, and deep-learning models that will produce new knowledge in the years to come. Importantly, several Fellows are consolidating their positions in academic institutions and are engaged in leadership activities in scientific societies, journals, and in professional organizations.

These accomplishments are even more impressive considering that because of the pandemic, the CARL II cohort has yet to meet physically!

This will change now that the world is opening for international travel for people who are vaccinated against COVID. In line with these developments, our first physical meeting will be a regional European CARL II meeting held in Odense, Denmark on November 26-28 with other regional meetings in preparation. Building upon these regional meetings, a global CARL II residential, also to be held in Denmark, is planned for 2022.

In addition to in-person activities in CARL, we will be bringing back the hugely popular CARLoquium. Using the unique Virbela platform to showcase excellent scientific presentations from all over the world, CARLoquium will return on March 1-2 2022 to provide the same inexpensive, easy access conference that will allow everyone interested in research to mingle globally in real-time. The 2022 CARLoquium will have a special focus on engaging chiropractic students in science and evidence.

CARLoQUIUM 2022

Sick of Zoom meetings? Missing your conference buddies?

Join us for a virtual conference to meet, chat, and share chiropractic research



Live sessions with
keynotes & posters



Time zone friendly

1st and 2nd March 2022 - stay tuned for details!

Abstract submissions opening soon

www.carlresearchfellows.org/carloquium-2022

Run by the CARL II Fellows
Chiropractic Academy for Research Leadership

CARL Fellows Updates

David McNaughton
PhD Candidate, School of Psychological Sciences, Macquarie University

Considering an extended COVID-19 lockdown in Sydney, 2021 has been a productive final year in my PhD. I have had 2 manuscripts accepted for publication and a third currently under review. Further, I am in my final few months prior to submitting my PhD thesis. As this chapter of my academic career comes to a close, I am looking forward to the exciting opportunities post PhD, as well as ongoing collaborations with the CARL cohort.



Aron Downie
Senior lecturer, Department of Chiropractic, Macquarie University

2021 has been a challenging due to COVID-19 impacted teaching commitments. Interacting with the CARL fellows and mentors has helped to keep me focused on driving projects forward. Highlights during 2020 include: two HDR student completions, and invited presentations at the Norwegian Chiropractors Association National Conference and Chiropractic Australia Summit On-Line.



Hazel Jenkins
Senior lecturer, Department of Chiropractic, Macquarie University;

2021 has been a productive year with a number of papers accepted for publication, including a trial testing the effectiveness of the low back pain patient education booklet I developed as part of my PhD. I have been enjoying working with the other CARL fellows on various research projects, and getting to know each other despite not being able to meet in person. Grant applications have been a focus this year, between submitting grants to further my own research program and being involved as an associate investigator on two successful grants investigating primary care management of low back pain.



Sasha Aspinall
Lecturer, Clinical Chiropractic, Murdoch University Australia
 In July I was fortunate to start a permanent job lecturing in the chiropractic course at Murdoch University in Western Australia. This has kept me very busy with teaching! I've also been plugging away at a couple of research projects at the same time, including an exciting systematic review looking at sham lumbar manipulation techniques.



CARL Fellows Updates (cont.)



Steen Harsted
*Assistant Professor,
University of Southern
Denmark*

CARLoquium 2021 was a highlight. Months of intense planning and teamwork was rewarded with a very successful virtual conference. It was a great experience to be involved in the entire process.

Andrée-Anne Marchand
*LTA, Department of
Chiropractic, Université du
Québec à Trois-Rivières*

The past few months have been dedicated to preparing an important salary grant proposal. If successful, it would allow me to spend most of my time working toward improving health care trajectories for patients with low back pain by promoting appropriate and timely access to public health care services through evidence-based triage. Earlier this month, I was granted a tenure-track position at UQTR and I look forward to taking on this new challenge.



Luana Nyirö
*PhD Candidate, Balgrist
University, Zurich
Switzerland*

After several months of work, it was really nice to finally "harvest some fruits" and to have two new research papers published this summer - one of them led by Steen Harsted; I really enjoyed to collaborate with my CARL peers and I look forward to the next project. My personal highlight was in September 2021, when the Continuing Education Conference of the Swiss Chiropractic Association took place as the first physical meeting after a long time; it was truly exciting to finally meet again, exchange clinical and scientific knowledge with colleagues and friends and after all, it was my first time to present at the General Assembly as a board member of the Swiss Chiropractic Association.

Cecille Øverås
*PhD Fellow
University of Southern
Denmark*

My focus is now on my last PhD article and on writing my thesis. A recent highlight was publishing the main results from selfBACK in JAMA Internal Medicine in August this year. The EU-project selfBACK, which I have been involved in since 2018, came officially to an end earlier this year but is kept alive with presentations on conferences, meetings and additional subgroup analysis. As the first author, I recently submitted a secondary analysis paper from selfBACK that is currently under review. Among a couple of other paper projects, I am involved in the COST Action DE-PASS ("Determinants of Physical Activities in Settings"), where I, together with others at NTNU, are part of the leader group for WP2 in this EU initiative.



CARL Leadership activities

Ken Weber

- Associate Editor Pain Medicine
- Reviewer, Department of Veterans Affairs, Spinal Cord Injury Disorder and Pain Panel

Luana Nyirö

- Member of the Medical Faculty Assembly (delegate of junior researchers) at the University of Zurich
- Member of the Awards committee of the Graduate Research Campus (GRC) at the University of Zurich
- Member of the Executive Board of the Swiss Chiropractic Association (Head of Research Department)

Eric Roseen

- Director, Program for Integrative Medicine and Health Disparities, Department of Family Medicine, Boston University School of Medicine and Boston Medical Center
- Program Planning Committee Member, International Congress on Integrative Medicine and Health (Phoenix, Arizona, USA, May 24-26, 2022)

Aron Downie

- Member, local organising committee, 17th International Forum for Back and Neck Pain Research in Primary Care
- Associate Editor, BMC Musculoskeletal Disorders
- Australian Chiropractors Association academic program judge



CARL Fellow Updates (cont.)



James Young
PhD Candidate,
University of Southern
Denmark

Despite the difficulties in completing a PhD during the Covid pandemic, this has been a productive research year for me. I have been fortunate to complete and publish some of the projects that will make up my PhD thesis on multimorbid lumbar spinal stenosis with knee or hip osteoarthritis, as well as a series of publications and reports on an adaptable policy blueprint on musculoskeletal health aimed at strengthening global health systems.

Jessica Wong
PhD Candidate,
Epidemiology Division,
Dalla Lana School of
Public Health, University of
Toronto
Assistant Professor,
Graduate Studies,
Canadian Memorial
Chiropractic College

I have been focusing on finishing my PhD thesis this year. I have completed my three objectives and am now writing the dissertation. I was also recently awarded an operating grant from the Canadian Chiropractic Research Foundation as co-principal investigator. In collaboration with the World Health Organization, this project will develop a global indicator of effective coverage for back pain rehabilitation, to be used in population-based surveys. It has been exciting working with the CARL mentors and fellows, especially in organizing the inaugural CARLoquium! I look forward to planning next year's CARLoquium and getting involved in more projects with the team.



Eric Roseen
PhD candidate, Rehabilitation
Science, MGH Institute of
Health Professions
Assistant Professor of Family
Medicine, Boston University /
Boston Medical Center

Since March I have had five new manuscripts accepted or published and two proposals funded by the US National Institutes of Health (Administrative Supplement to current K23 Award; Loan Repayment Program renewal). I completed my PhD qualifying exam in June and am working on my dissertation which is focused on the use of nonpharmacologic treatments for back pain in low-income settings. Lastly, I am the new Director of the Program for Integrative Medicine and Health Disparities at Boston University School of Medicine and Boston Medical Center. This program began in 2004 and has a mission to develop a widely accessible, multicultural, cross-disciplinary, national model of integrative health for all through clinical services, education, research and advocacy.

Kenneth Weber
Instructor in the
Department of
Anesthesiology,
Perioperative and Pain
Medicine at Stanford
University

This year I have continued to make progress linking quantitative spinal cord MRI measures to sensory and motor status in people with traumatic and degenerative spinal cord injury. Highlights for me include the submission of my first independent National Institutes of Health (USA) research project grant application and being awarded the American Chiropractic Association's Researcher of the Year.



New CARL publications and presentations!

Harsted S, Nyirö L, Downie A, Kawchuk GN, O'Neill S, Holm L, Nim CG. Posterior to anterior spinal stiffness measured in a sample of 127 secondary care low back pain patients. *Clin Biomech* (Bristol, Avon). 2021 Jul;87:105408. doi: 10.1016/j.clinbiomech.2021.105408. Epub 2021 Jun 10. PMID: 34157436.

Nim CG, Downie AS, Kawchuk G, Perle S, O'Neill S, Leboeuf-Yde C. The importance of selecting the correct site to apply spinal manipulation when treating spinal pain: Myth or reality? A systematic review WFC congress, 2021, Virtual, Platform presentation

Nim CG, Weber II K, Kawchuk G, O'Neill S. Spinal manipulation and modulation of pain sensitivity in persistent low back pain: a secondary cluster analysis of a randomized trial IASP world congress, 2021, Virtual, Poster presentation

Nim CG, Kongsted A, Downie AS, Werner W. Self-reported visual pain trajectories, WFC congress, 2021, Virtual, Platform presentation

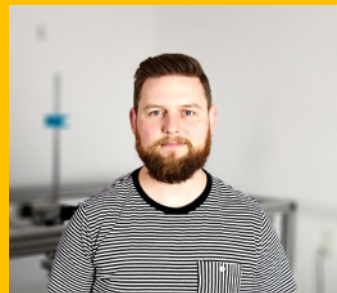
CARL Fellows Updates (cont.)

Ongoing CARL projects



Amy Miller
Clinical Lecturer in Chiropractic, Bournemouth University UK
Following my Viva Voce examination in June, and approval of my corrections, I have been awarded my PhD by Bournemouth University, and will be graduating next week. I have recently accepted a lecturing position at AECC University College, and we are already underway with two new research projects.

Casper Nim
PhD Candidate, University of Southern Denmark
Since last I have successfully defended my PhD. I am currently working on longitudinal trajectory pain data from two Danish primary care cohorts, and was lucky to be awarded the "New investigator award" at the WFC congress for this work. I have submitted multiple grants attempting to start up a randomized controlled trial examining a multidisciplinary team-based approach in the long-term management of severe low back pain. We are currently running the feasibility trial – very interesting.



Gender distribution of speakers at chiropractic conferences (Sasha Aspinall, Eric Roseen, Casper Nim, Cecilie K Øverås, Steen Harsted, James Young, Amy Miller, Greg Kawchuk, and Jan Hartvigsen)

Planning Phase

Changes in PPT after SMT in a clinical setting (Casper Glissman Nim and Sasha Aspinall)

Data analyses and writing of paper

Selection of therapeutic interventions in patients presenting for chiropractic care in Australia and Canada: secondary analysis of COAST and OCOAST data (Hazel Jenkins, Aron Downie, James Young, Jessica Wong, David McNaughton, Cecilie K Øverås, Eric Roseen, and Jan Hartvigsen)

Organised access to combined data set, planning to start data analysis and manuscript preparation

Epidemiology of musculoskeletal conditions among older adults (Eric Roseen, James Young, Cecilie K Øverås, Hazel Jenkins, David McNaughton and Aron Downie)
Currently developing 3 projects from a large longitudinal cohort study of older adults.

Deep-Learning Models for Automated Segmentation of Muscles (Kenneth Weber and Hazel Jenkins)
Analysis in progress

CARL Fellows - Individual publications

Speedtsberg, M., **Harsted, S.**, Hestbæk, L., Lauridsen, H.H., Bencke, J., Holsgaard-Larsen, A., 2021. Early identification of toe walking gait in preschool children - Development and application of a quasi-automated video screening procedure. *Clinical Biomechanics* 84, 105321. <https://doi.org/10.1016/j.clinbiomech.2021.105321>

McNaughton, D., Bacigalupo, C., Georghiadis, A., Beath, A., Hush, J., & Jones, M. (2021, 2021/05/23). Design, Development and Functionality of a Haptic Force-Matching Device for Measuring Sensory Attenuation. *Behavior Research Methods*. <https://doi.org/10.3758/s13428-021-01605-6>

McNaughton, D. T., Andreasson, A., Ljótsson, B., Beath, A. P., Hush, J. M., Talley, N. J., Ljunggren, G., Schmidt, P. T., Agréus, L., & Jones, M. P. Limited evidence of moderation of the association between gastrointestinal symptoms and prospective healthcare utilisation by quality of life. *Alimentary Pharmacology & Therapeutics*

Submitted: McNaughton, D., A., Beath, A., Hush, J., & Jones, M. Sensory attenuation differences in chronic pain subjects and health controls. *PAIN Reports*.



CARL Fellows - Individual publications (cont.)

Nyirö L, Potthoff T, Siegenthaler MH, Riner F, Schweinhardt P, Wirth B. Translation and validation of the German version of the Young Spine Questionnaire. *BMC Pediatr.* 2021 Aug 24;21(1):359. doi: 10.1186/s12887-021-02804-y. PMID: 34429090; PMCID: PMC8383347.

Submitted: Musculoskeletal healthcare at a Swiss university hospital chiropractic medicine outpatient clinic in 2019: a health services research study. L Hofstetter, M Häusler, M Mühlemann, L **Nyirö**, D Mühlemann, C Hincapié: submitted to *BMC Health Services Research*.

Submitted: Responsiveness of the German Version of the Neck Disability Index in chronic neck pain patients: a prospective cohort study with a seven-week follow-up. A Langenfeld, AP Gassner, B Wirth, M Mühlemann, L **Nyirö**, C Bastiaenen, J Swanenburg: submitted to *Musculoskeletal Science and Practice*.

Young JJ, Hartvigsen J, Roos EM, Ammendolia C, Kongsted A, Skou ST, Grønne DT, Jensen RK. Symptoms of lumbar spinal stenosis in people with knee or hip osteoarthritis or low back pain: a cross-sectional study of 10,234 participants in primary care. *Osteoarthritis and Cartilage.* 2021:S1063458421008529.

Hansen LS, **Young JJ**, Hurwitz E, Kopansky-Giles D, Eberspaecher S, Outerbridge G, Hartvigsen J. Musculoskeletal conditions in persons living with HIV/AIDS: a scoping review. *Current Medical Practice.* 2021. Accepted, in press.

Briggs AM, Jordan JE, Kopansky-Giles D, Sharma S, March L, Huckel-Schneider C, Mishra S, **Young JJ**, Slater H. "Without a global strategy, the management of musculoskeletal disorders will continue to be suboptimal" the need for adaptable global guidance in health system strengthening for musculoskeletal health. A qualitative study of international key informants. *Global Health Research and Policy.* 2021;6:24.

Briggs AM, Huckel-Schneider C, Slater H, Jordan JE, Parambath S, **Young JJ**, Sharma S, Kopansky-Giles D, Mishra S, Akesson KE, Ali N, Belton J, Betteridge N, Blyth FM, Brown R, Debere D, Dreinhöfer KE, Finucane L, Foster HE, Gimigliano F, Haldeman S, Haq SA, Horgan B, Jain A, Joshipura, Kalla AK, Lothe J, Matsuda S, Mobasher A, Mwaniki L, Nordin MC, Pattison M, Reis FJJ, Soriano ER, Tick H, Waddell J, Wiek D, Woolf AD, March L. Health systems strengthening to arrest the global disability burden: empirical development of prioritised components for a global strategy for improving musculoskeletal health. *BMJ Global Health.* 2021;6:e006045.

Liaghat B, Pedersen JR, **Young JJ**, Thorlund JB, Juul-Kristensen B, Juhl CB. Joint hypermobility in athletes is associated with shoulder injuries: a systematic review and meta-analysis. *BMC Musculoskeletal Disorders.* 2021;22(1):1-9.

Young JJ, Važić O, Cregg A. Management of knee and hip osteoarthritis: an opportunity for the Canadian chiropractic profession. *Journal of the Canadian Chiropractic Association.* 2021;65(1):6-13.

de Luca K, McDonald M, Montgomery L, Sharp S, Young A, Vella S, Holmes MM, **Aspinal S**, Brousseau D, Burrell C, Byfield D. COVID-19: how has a global pandemic changed manual therapy technique education in chiropractic programs around the world?. *Chiropractic & manual therapies.* 2021 Dec;29(1):1-1.

Roseen EJ, Conyers FG, Atlas SJ, Mehta DH. Initial Management of Acute and Chronic Low Back Pain: Responses from Brief Interviews of Primary Care Providers. *J Altern Complement Med.* 2021 Mar; 27(S1):S106-S114. PMID: 33788610; PMCID: PMC8035915

Roseen EJ, Rajendran I, Stein P, Fredman L, Fink HA, LaValley MP, Saper RB. Association of Back Pain with Mortality: a Systematic Review and Meta-analysis of Cohort Studies. *J Gen Intern Med.* 2021 Apr 19. PMID: 33876379 [Altmetric score: 171]

Roseen EJ, Purtle J, Zhang W, Miller DW, Schwartz AW, Ramanadhan S, Sherman KJ. The Intersection of Dissemination Research and Acupuncture: Applications for Chronic Low Back Pain. *Glob Adv Health Med.* 2021; 10:2164956120980694. PMID: 34104573; PMCID: PMC8150432;

Miller DW, **Roseen EJ**, Stone JAM, Gardiner P, Olson J, Rosen S, Wayne P, Davis R, Coeytaux R. Incorporating Acupuncture Into American Healthcare: Initiating a Discussion on Implementation Science, the Status of the Field, and Stakeholder Considerations. *Glob Adv Health Med.* 2021; 10:21649561211042574. PMID: 34471570; PMCID: PMC8404666;

Marshall A, Joyce C, Tseng B, Gerlovin H, Yeh G, Sherman KJ, Saper RB, **Roseen EJ**. Effect of Yoga, Physical Therapy, and Education on Pain Self-Efficacy, Coping Skills and Fear Avoidance Beliefs in Adults with Chronic Low Back Pain. *Pain Med.* Accepted.

Wong JJ, Côté P, Tricco AC, Watson T, Rosella LC. Effect of back problems on healthcare utilization and costs in Ontario, Canada: A population-based matched cohort study. *Pain* 2021;162(10):2521-2531.

Wong JJ, Hogg-Johnson S, Bussièrès AE, French SD, Mior SA. The association between chiropractors' view of practice and patient-encounter level characteristics in Ontario, Canada: A cross-sectional study. *Chiropr Man Therap* 2021;29(1):41.

Shergill Y, Côté P, Shearer H, **Wong JJ**, Stupar M, Tibbles A, Cassidy JD. Inter-rater Reliability of the Quebec Task Force Classification System for Recent-onset Whiplash Associated Disorders. *Journal of Canadian Chiropractic Association* 2021; 65(2): 186-192.

Wong JJ, Tricco AC, Côté P, Liang CY, Lewis JA, Bouck Z, Rosella LC. Association between depressive symptoms or depression and health outcomes for low back pain: a systematic review and meta-analysis. *J Gen Intern Med* 2021 Aug 12. doi: 10.1007/s11606-021-07079-8.

Papaconstantinou E, Cancelliere C, Verville L, **Wong JJ**, Connell G, Yu H, Shearer H, Timperley C, Chung C, Porter B, Myrtos D, Barrigar M, Taylor-Vaisey A. Effectiveness of non-pharmacological interventions on sleep characteristics among adults with musculoskeletal pain and a comorbid sleep problem: A systematic review. *Chiropr Man Therap* 2021;29(1):23.

Yu H, Côté P, **Wong JJ**, Shearer HM, Mior S, Cancelliere C, Randhawa K, Ameis A, Carroll LJ, Nordin M, Varatharajan S, Sutton D, Southerst D, Jacobs C, Stupar M, Taylor-Vaisey A, Gross DP, Brison RJ, Paulden M, Ammendolia C, Cassidy JD, Marshall S, Bohay RN, Stapleton J, Lacerte M. Non-invasive management of soft tissue disorders of the shoulder: A clinical practice guideline from the Ontario Protocol for Traffic Injury Management (OPTIMA) Collaboration. *Eur J Pain* 2021 May 4. doi: 10.1002/ejp.1788.

A cross-sectional analysis of persistent low back pain, using correlations between lumbar stiffness, pressure pain threshold, and heat pain threshold. **Nim CG**; O'Neill S; Geltoft AG; Jensen LK; Sciøttz-Christensen B; Kawchuk GN. *BMC Chiropractic and Manual Therapies*, 2021

CARL Fellows - Individual publications

The inhibitory effect of conditioned pain modulation on temporal summation in low-back pain patients. O'Neill S, Holm L, Filtenborg JB, Arendt-Nielsen L, **Nim CG**. Scandinavian Journal of Pain, 2021

Hancock MJ, Maher C, Jarvik JG, Battié MC, Elliott J, Jensen T, Panagopoulos J, **Jenkins H**, Pardey M, McIntosh J, Magnussen J. Reliability and validity of subjective radiologist reporting of temporal changes in lumbar spine MRI findings. PM&R. 2021 Sep 12.

Simula, A. S., **Jenkins, H. J.**, Hancock, M. J., Malmivaara, A., Booth, N. & Karppinen, J., Patient education booklet to support evidence-based low back pain care in primary care: a cluster randomized controlled trial; 7 Sep 2021, In: BMC Family Practice. 22, 1, p. 1-15 15 p., 178.

Jenkins, H. J., Downie, A. S., Fernandez, M. & Hancock, M. J., Dec 2021, Decreasing thoracic hyperkyphosis – Which treatments are most effective? A systematic literature review and meta-analysis; In: Musculoskeletal Science and Practice. 56, p. 1-19 19 p., 102438.

Parthipan, S., Bowles, C., de Luca, K. & **Jenkins, H.**, Apr 2021, The association between guideline adherent radiographic imaging by chiropractic students and the diagnostic yield of clinically significant findings; In: Journal of the Canadian Chiropractic Association. 65, 1, p. 66-75 10 p.

Submitted: **Jenkins H**, Moloney N, French S, Maher C, Dear B, Magnussen J, Hancock M; General practitioner experiences using a low back pain management booklet aiming to decrease non-indicated imaging for low back pain; Implementation Science Communications

Submitted: Ayre J; **Jenkins H**; McCaffery K; Maher C; Hancock M; Unique considerations for exercise programs to prevent future low back pain: the patient perspective; Pain

Submitted: **Jenkins H**, Ferreira G, Downie A, Maher C, Buchbinder R, Hancock M; The available evidence assessing the effectiveness of ten commonly recommended treatments for non-specific low back pain: an evidence map; Pain

Submitted: **Jenkins H**, French S, Young A, Moloney N, Maher C, Dear B, Magnussen J, Hancock M; Feasibility of testing the effectiveness of a theory-informed intervention to reduce imaging for low back pain: a pilot cluster randomised controlled trial; Pilot and Feasibility Studies

Submitted: **Jenkins H**, Kongsted A, French S, Secher Jensen T, Doktor K, Hartvigsen J, Hancock M; What are the effects of diagnostic imaging on clinical outcomes in patients with low back pain presenting for chiropractic care: a matched observational study; Chiropractic and Manual Therapies

Smith AC, O'Dell DR, Dungan D, Robinson E, Ashesh T, Gisbert R, **Weber II KA**, Berliner JC, Albin SR. Spinal cord tissue bridges validation study: predictive relationships with sensory scores following cervical spinal cord injury. Topics in Spinal Cord Injury Rehabilitation, In Press.

Smith AC, O'Dell DR, Albin SR, Berliner JC, Dungan D, Robinson E, Elliott JM, Carballido-Gamio J, Stevens-Lapsley J, **Weber II KA**. Lateral corticospinal tract and dorsal column damage: predictive relationships with motor and sensory scores at discharge from acute rehabilitation after spinal cord injury, Archives of Physical Medicine and Rehabilitation, In Press.

Martucci KT, **Weber II KA**, Mackey S. Spinal Cord Resting State Activity in Individuals With Fibromyalgia Who Take Opioids. Frontiers in Neurology, 2021;12:1251.

Gilam G, Cramer EM, **Weber II KA**, Ziadni M, Kao MC, Mackey S. Classifying chronic pain using multidimensional pain-agnostic symptom assessments and clustering analysis, Science Advances, 2021;7(37):eabj0320.

Cohen-Adad J, Alonso-Ortiz E, Abramovic M, Arneitz C, ... **Weber II KA**, Weiskopf N, Wise RG, Wyss PO, Xu J. Open-access MRI data of the spinal cord and reproducibility across participants, sites, and manufacturers. Scientific Data, 2021;8:219.

Cohen-Adad J, Alonso-Ortiz E, Abramovic M, Arneitz C, ... **Weber II KA**, Weiskopf N, Wise RG, Wyss PO, Xu J. Generic acquisition protocol for quantitative MRI of the spinal cord. Nature Protocols, 2021.

Weber II KA, Abbott R, Bojilov V, Smith AC, Wasielewski M, Hastie TJ, Parrish TB, Mackey S, Elliott JM. Multi-Muscle Deep Learning Segmentation to Automate the Quantification of Muscle Fat Infiltration in Cervical Spine Conditions, Scientific Reports, 2021;11:16567.

Berliner JC, O'Dell DR, Albin SR, Dungan D, Sevigny M, Elliott JM, **Weber II KA**, Abdie DR, Anderson JS, Rich AA, Seib CA, Sagan HGS, Smith AC. The influence of conventional T2 MRI indices in predicting who will walk outside one year after spinal cord injury, Journal of Spinal Cord Medicine, In Press.

Smith AC, Albin SR, O'Dell DR, Berliner JC, Dungan D, Sevigny M, Draganich C, Elliott JM, **Weber II KA**. Axial MRI biomarkers of spinal cord damage predict future walking and motor function. Spinal Cord, 2021;59(6):693-699.

Paliwal M, **Weber KA II**, Smith AC, Elliott JM, Muhammad F, Dahdaleh NS, Bodurka J, Dhaher Y, Parrish TB, Mackey S, Smith ZA. Fatty infiltration in cervical flexors and extensors in patients with degenerative cervical myelopathy using a multi-muscle segmentation model. PLoS ONE, 2021;16(6):e0253863

Franettovich Smith MM, Elliott JM, Al-Najjar A, **Weber II KA**, Hoggarth MA, Vicenzino B, Hodges PW, Collins NJ. New insights into intrinsic foot muscle morphology and composition using ultra-high-field (7-Tesla) magnetic resonance imaging. BMC Musculoskelet Disord, 2021;22(1):97.

Hoggarth MA, Elliott JM, Smith ZA, Paliwal M, Kwasny MJ, Wasielewski M, **Weber II KA**, Parrish TB. Macromolecular changes in spinal cord white matter characterize whiplash outcome at 1-year post motor vehicle collision. Scientific Reports, 2020;10:22221.

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