



# The Healthcare Evolution

ACCRAAC 2024 30th Annual Educational & Research Agenda Conference  
March 21 – 23, 2024 Sheraton Hotel and Marina, San Diego CA

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ASSOCIATION OF  
CHIROPRACTIC  
COLLEGES



The purpose of this document is to provide the scientific platform and poster presenters the preliminary schedule for the conference so they may plan their travel. This preliminary schedule includes the order of presentations and moderator information. Note that there are 3 parallel platform sessions running at the same time.

<b>PRELIMINARY OUTLINE OF PROGRAM 11-21-2023</b>			
<b>Friday, March 22, 2024</b>			
8:00-10:00	Welcome/Introduction - Pacific Jewel Ballroom		
	Plenary Presentations		
<b>10:00-10:30</b>	<b>Break</b>		
10:30-12:00	Invited Workshop A – Coral 1-2	Invited Workshop B – Coral 3	Invited Workshop C – Coral 4
<b>12:00-1:30</b>	<b>Lunch – Pacific Jewel</b>		
1:30-3:30	Scientific Platforms A – Coral 1-2	Scientific Platforms B – Coral 3	Scientific Platforms C – Coral 4
<b>3:30-4:00</b>	<b>Break</b>		
4:00-6:00	Scientific Platforms D Coral 1-2	Scientific Platforms E – Coral 3	Scientific Platforms F – Coral 4
6:00-7:30	<b>Posters and Reception – Silver Pearl Ballroom</b>		
<b>Saturday, March 23, 2024</b>			
8:00-10:00	Plenary Presentations (2)		
<b>10:00-10:30</b>	<b>Poster/Break</b>		
10:30-12:00	Invited Workshop G – Coral 1-2	Invited Workshop H – Coral 3	Invited Workshop I – Coral 4
<b>12:00-1:30</b>	<b>Lunch – Pacific Jewel Ballroom</b> <b>Research Awards</b>		
1:30-3:30	Scientific Platforms G Coral 1-2	Scientific Platforms H – Coral 3	Scientific Platforms I – Coral 4
<b>3:30-4:00</b>	<b>Break</b>		
4:00-5:00	Closing Plenary		
<b>6:00-8:30</b>	<b>Reception and Dinner - TBD</b>		

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**Friday, March 22, 2024 1:30-3:30** Scientific Platforms A Coral 1-2

## **Evolving Chiropractic Education and Research**

As demand for chiropractic research and evidence grows, chiropractors must be prepared to address these demands. This session will consider knowledge and skills necessary for chiropractic practice and research. This session will review current and new concepts related to evidence-based practices focusing on chiropractic skills and contribution to new knowledge.



Moderator  
Stuart Kinsinger  
Center for Personalized  
Education for Physicians



Moderator  
Brett Guist  
Canadian Memorial Chiropractic  
College

### Research Presentations:

- **Examination of chiropractic students' force and speed in delivery of chiropractic adjustments** *Mara Trowbridge, Finnley Parsons, Krista Ward, Monica Smith*
- **Comparison of force-time characteristics of prone cervico-thoracic spinal manipulative therapy between chiropractic interns and experienced chiropractors** *Francois Perron, Martha Funabashi, Jean-Luc Gauthier, Isabelle Pagé*
- **Correlation between chiropractic manipulative therapy class cumulative grade point average and clinic spinal manipulation exit exam grade** *Michael Sheppard, John Ward*
- **A qualitative study investigating the challenges and opportunities for building research capacity in sports-focused research in the chiropractic profession** *Alexander Lee, Lara deGraauw, Ali Masoumi, Bradley Muir, Melissa Belchos, Kaitlyn Szabo, Christopher deGraauw, Scott Howitt*
- **Research capacity and culture at the Canadian Memorial Chiropractic College: A mixed methods study** *Carol Ann Weis, Diane Grondin, Danielle Southerst, Sam Howarth, Mark Fillery, Christine Bradaric-Baus, Janet D'Arcy, Silvano Mior*
- **The relationship between satisfaction of work-related needs and forms of motivation for the pursuit of scholarly activity in chiropractic faculty** *Christine Major, Melinda Novak, Sarah Visconti, Kathryn Ross, Kara Burnham*
- **Development of a faculty-driven mixed methods exploratory study of a collegiate research climate** *Kevin Percuoco, Alex Margrave, Patrik Schneider, Breanne Wells, Michael VanNatta, Kara Shannon, Meredith Meyers, Amberly Ferguson, John Crouse, Kira Baca, Brian Anderson, Dustin Derby, Lia Nightingale, Stacie A. Salisbury*

**3:30-4:00 Break**



**Friday, March 22, 2024 1:30-3:30 Scientific Platforms B Coral 3**

**Exploring the Science of Chiropractic**

Chiropractic knowledge of basic science principles continues to grow with new research studies. Understanding how the neuromusculoskeletal system functions helps chiropractors improve their practices and apply these principles to patient care. This session will consider current clinical, physiological, and biomechanical research and relate these findings to how we can better understand patient function and dysfunction.



Moderator  
 Ilija Arar  
 Northeast College of Health  
 Sciences



Moderator  
 Bart Green  
*Journal of Chiropractic Education*

Research Presentations:

- **Motor performance of participants with chronic neck pain and asymptomatic participants pre- and post-spinal manipulation using separate eye and head movement fitts tasks** *Geoffrey Gelley, Steven Passmore, Brian MacNeil*
- **Measuring adjustment forces: Applied compared to transmitted loads** *Brent Russell, Edward Owens, Lydia Dever, Ronald Hosek, Kevin Tran*
- **Neural connectivity alterations in people with chronic low back pain receiving chiropractic care** *Usman Ghani, Imran Khan Niazi, Nitika Kumari, Imran Amjad, Samran Navid, Kelly Holt, Moez Ashfaque, Amit Pujari, Ernest Kamavuako, Heidi Haavik*
- **The impact of chronic neck pain on oculomotor performance during near point convergence and Fitts tasks** *Steven Passmore, Michayla Esteves*
- **Comparing balance and kinematic effects of standard athletic taping of the ankle during jumping activities** *Shari Wynd, Rachiel Torrence, Todd Riddle, John Ward*
- **Spinal manipulation effect on standing balance on a force plate of individuals with neck and low back pain** *John Ward, Jesse Coats, Carol Longo*
- **In-vivo ultrasound measurement of spinous process separation during axial distraction** *Maruti Ram Gudavalli, Ralph Kruse, Bret A. White, Stacey L. Rider*
- **Exploring the acute effects of spinal manipulation on handgrip strength and reaction time relative to anxiety and neck pain level** *John Ward, Carol Longo*

**3:30-4:00 Break**

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**Friday, March 22, 2024 1:30-3:30 Scientific Platforms C Coral 4**

## Public Health and the Future Chiropractic Workforce

The world population continues to grow, and chiropractors must be prepared for these global changes. This session will consider presentations about the preparation of chiropractors for current and future challenges in healthcare. We will review current and new concepts related to evidence-based practices within special populations as it relates to chiropractic practice.



Moderator  
Martha Kaeser  
University of Western States



Moderator  
Jonathan Egan  
Southern California University of  
Health Sciences

Research Presentations:

- **Racial and ethnic representation among complementary and integrative health graduates** *Margaret Whitley, Nipher Malika, Patricia Herman, Ian Coulter, Margaret Chesney, Michele Maiers, Emma Bianculli*
- **The lived experience of pregnant women under chiropractic care** *Joel Alcantara, Elizabeth Emmanuel, Sandra Grace, Stephen Myers*
- **Women's health and chiropractic: Educational audit and development of core competencies** *Carol Ann Weis, Danica Brousseau, Chantal Doucet, Cecilia Bergström, Barbara Drake-Land, Deborah Kopansky-Giles, Nichelle Gurule, Francesca Wuytack, Katherine A. Pohlman*
- **The 4Ms of age-friendly healthcare system: A qualitative study of what matters most to chiropractic students** *Lisa Killinger, Stacie Salisbury, Judy Bhatti, Elissa Twist*
- **Evaluating the effectiveness of team-based chiropractic applied clinical neuroscience care on self-reported depression and cognition for medication-resistant depression: A pilot study** *Stephanie Sullivan, Michael Longyear, Dominic Fetterly, Emily Drake, Mitchell Ferguson, Dylan Saulsbery*
- **The relationship between stress scores, a single-session of chiropractic care, and electroencephalography patterns** *Courtney Bliese, Emily Drake, Margaret Sliwka, Stephanie Sullivan*
- **Effectiveness of a peer mind body medicine training program on faculty stress responses** *Suzanne Lady, Katie Lockwood, Kara Burnham, Chad Lambert, Christine Major*
- **The effects of study time, sleep duration, perception of course difficulty, and grade satisfaction on final exam scores** *Niu Zhang, Xiaohua He*

**3:30-4:00 Break**



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**Friday, March 22, 2024** 4:00-6:00 Scientific Platforms D Coral 1-2

## Evolution of Education and the Chiropractic Work Environment

The work environment for chiropractic care continues to evolve and chiropractors must be prepared to address these demands. This session will consider presentations about the preparation of chiropractors for current healthcare environments. This session will review current and new concepts related to evidence-based practices focusing on chiropractic education and integration.



Moderator  
John Mrozek  
Texas Chiropractic College



Moderator  
Beth Heim  
Northwestern University of Health  
Sciences

Research Presentations:

- **Examination of student and curricular time requirements for faculty** *Kristy Carbonelli-Cloutier, Mehrsa Harati, Dana Hollandsworth, Chris Malaya*
- **Chiropractic student perceptions of rehabilitation knowledge and skill level improve after incorporation a video-based group learning activity in an advanced rehabilitation course** *James Strange, Cortney Williams, Christine Major*
- **The impact of class attendance on both individual and collective exam performances** *Xiaohua He*
- **Improving patient safety in the chiropractic teaching clinic setting: A qualitative analysis of stakeholder suggestions** *Bryan Porter, Alex Lee, Cameron Borody, Eric St-Onge, Martha Funabashi*
- **Complexity of veterans within a Veterans Affairs chiropractic clerkship using the Charlson co-morbidity index** *Michael R. Cole II, Charles Penza*
- **Chiropractic student attributes and perspectives about their future** *John Ward, Osiel Pena*
- **Hospital-based chiropractors and interdisciplinary care training: An education descriptive report** *Katie Benson, William Foshee, Jason Moss, Keilah Brown, Joseph Chung, Brandon Meseberg, Breanna Leach, Chelsea Frank, Jeff Miller, Adam Wilkerson, Eric Daniel*
- **Applying universal design for learning to health care education** *Michael Cioffi*

**6:00-7:30 Posters and Reception** – Silver Pearl Ballroom See below for poster presentations



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**Friday, March 22, 2024 4:00-6:00 Scientific Platforms E Coral 3**

## Chiropractic Public Health and Clinical Applications

Chiropractic care brings value to patient care and population health. Chiropractors practicing within the healthcare system must be aware of evidence-based health care principles and practices. This session will discuss new findings and recent studies of chiropractic care in integrated and whole health settings and will focus on how chiropractors can improve patient care.



Moderator  
Stephanie Sullivan  
Life University



Moderator  
Mehrsa Harati  
Parker University

### Research Presentations:

- **Cost-effectiveness of spinal manipulation for back or neck pain** *Brent Leininger, Gert Bronfort, Roni Evans, James Hodges, Eva Enns, Karen Kuntz*
- **Association between pregnancy and spontaneous cervical artery dissection: A propensity-matched retrospective cohort study** *Robert Trager, Clinton Daniels, Zachary Scott, Regina Marie Casselberry, Jamie Perez*
- **Healthcare provider perspectives of integrating a comprehensive spine care model in an academic health system: A cross-sectional survey** *Wren Burton, Stacie Salsbury, Christine Goertz*
- **Trends in utilization of non-pharmacological pain therapies under Medicare** *James Whedon, George Zakhary*
- **Forecasting the use of chiropractic services within the Veterans Health Administration** *Victoria Bensele, Kelsey Corcoran, Anthony Lisi*
- **Mapping chiropractic services within us federally qualified health centers** *Holli Kells, Charles Sawyer, Andrea Albertson, Michele Maiers*
- **What are the wider health benefits of chiropractic care** *David Wilmott, Christina Cunliffe, Adrian Hunnisett*
- **Prevalence of neck pain and disability in mild traumatic brain injury (concussion)** *Jeff King, Mike Schneider, Minnie Sundaram, Greg Kawchuk, Charity Patterson, Anthony Kontos*

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**Friday, March 22, 2024 4:00-6:00 Scientific Platforms F Coral 4**

## The Changing Chiropractic Healthcare Landscape

Chiropractors must be prepared to help a wide variety of people and be prepared to evolve as new technologies are available. This session will discuss the responsibilities that chiropractors must carry as well as new trends for chiropractic in healthcare delivery.



Moderator  
Krista Ward  
Life Chiropractic College West



Moderator  
Anne Venderley  
University of Western States

### Research Presentations:

- **The use and misuse of a health care professionals' power: A study of 32 professional misconduct cases** *F. Stuart Kinsinger*
- **Evolving healthcare education to address whole health leadership** *Jonathon Egan, Winmar Way, Michael Ramcharan*
- **Reviewing prior imaging in a chiropractic radiology practice: Influences on recommendations for additional diagnostic testing** *Emma Forlow, Ian McLean, Kira Baca, Robert Vining*
- **Chiropractic consultation requests from a neurosurgery service in a 1A Veterans Affairs health care system** *Robert Walsh, Alec Schielke, Ellen Chevillet*
- **Describing congruence between CPT codes and medical record text in Veterans Health Administration chiropractic notes** *Samuel M. Schut, Sarah E. Graham, Anna R. Sites, Brian C. Coleman, Anthony J. Lisi*
- **Use of chiropractic care in Alberta: Evidence for the restoration of diagnostic imaging funding** *Cecilia Bloxom, Natalie Carrington, Kelly Fleck*
- **Utilization rates by referral pathway and managed care profile in a multi-state, hospital-based chiropractic organization** *William Foshee, Jason Moss*
- **Identifying documentation of patient reported outcome measures in Veterans Health Administration chiropractic care using rule-based natural language processing** *Brian Coleman, Kelsey Corcoran, Anthony Lisi, Cynthia Brandt*

**6:00-7:30 Posters and Reception** – Silver Pearl Ballroom See below for poster presentations

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**Saturday, March 23, 2024** 1:30-3:30 Scientific Platforms G Coral 1-2

## Chiropractic Applications, Assessment, and Education

Chiropractic care had been challenged to rise to its potential during the recent COVID-19 pandemic. Chiropractic can add value to integrated healthcare settings and can expand on the value of patient care. This session will discuss the interface of chiropractic and the pandemic and will consider the quality of chiropractic assessment.



Moderator  
Celia Maguire  
Parker University



Moderator  
Hiwot Melka  
Southern California University of  
Health Sciences

Research Presentations:

- **Effect of suspension of chiropractic treatment during the COVID-19 mandated shutdown on patients' reported symptoms and function: A retrospective case study** *Igor Steiman, Silvano Mior, Chadwick Chung, Lauren Ead, Dan Wang*
- **Quality of life in chiropractic students pre- and post-COVID-19 lockdowns utilizing the short-form health survey-36** *Alice Cade, Kirk Stevens, Elly Whittaker, Reid Midanik*
- **Experiential learning: Evolution and pandemic changes** *Scott Dunham, David Starmer*
- **The psychological impact of the pandemic on primary healthcare providers: Perspectives from a primary care clinic** *Joe Lintz*
- **Public health emergencies: Addressing the mobilization of complementary and integrative and allied health professionals** *Cynthia Chapman, Ian Coulter, Patricia Herman*
- **Analyzing the implications of employing global scoring in chiropractic license examinations** *Igor Himelfarb, Nai-En Tang, Bruce L. Shotts*
- **Assessing the impact of an early program intervention on student board examination performance** *Jon Wilson, Joni Johnson, Emily Ford*
- **Correlation between student performance in NBCE-Part I and the innovative curriculum in the doctoral chiropractic program from Universidad Central del Caribe in Puerto Rico** *Kimberleve Rolón-Reyes, Yomarie Rivera-Román, Janisse Salas-Luciano*

**3:30-4:00 Break**

4:00-5:00 Closing Plenary





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**Saturday, March 23, 2024 1:30-3:30 Scientific Platforms H Coral 3**

## Evolution of Chiropractic and Spine Care

The fundamental impact of chiropractic care on spine outcomes for patients continues to evolve. Because our knowledge and skills continue to grow, chiropractors practicing within the healthcare system should be fluent in current evidence. This session will discuss new findings and recent studies of chiropractic care in integrated and whole health settings and will focus on how chiropractors may best improve patient care.



Moderator  
Ilija Arar  
Northeast College of Health  
Sciences



Moderator  
Bart Green  
*Journal of Chiropractic Education*

### Research Presentations:

- **Assessing treatments delivered by Veterans Affairs chiropractors in a multi-site pragmatic trial on patients with chronic low back pain** *Ryan Muller, Cynthia Long, Kei-Hoi Cheung, Harini Bathulapalli, Christine Goertz, Anthony Lisi*
- **The effectiveness of clinic versus home-based, artificial intelligence-guided therapy in patients with low back pain: A non-randomized clinical trial** *Benjamin Holmes, Kenan Alzouhayli, Nathan Schilaty, Takashi Nagai, Luca Rigamonti, April McPherson, Nathaniel Bates*
- **The prevalence of axial spondyloarthritis in patients treated for chronic back pain in chiropractic clinics: The Oregon chiropractic axial spondyloarthritis study** *Shireesh Bhalerao, Cydney Keller, David Perham, David Panzer, Kim Phung Nguyen, Rosy Quinn, William Malatestinic, Rebecca Bolce, Theresa Hunter, Atul Deodhar*
- **Neck disability index scores at 3 and 12-month follow-up for treatment of post-surgical cervical symptoms utilizing flexion distraction chiropractic manipulation: A case series** *Ralph Kruse, Maruti Gudavalli, Jason Klamson*
- **The use of rehabilitation exercises in conjunction with chiropractic care for neck pain** *Hay Yeung Cheng, Christina Cunliffe, Adrian Hunnisett*
- **The impact of what matters most: Activity goal setting on pain and disability ratings of older veterans receiving chiropractic care for chronic low back pain** *Casey J Rogers, Lisa Zubkoff, Katharina Echt, Madeleine E Hackney*
- **Clinical correlates of pressure pain thresholds in 98 patients with uncomplicated low back and leg pain: A retrospective consecutive case series** *Robert Leach, Kate Hayes, Stephanie Sullivan*
- **Barriers and facilitators to self-management support strategies among chiropractic interns managing spine pain patients at a French-Canadian chiropractic teaching program: A mixed method study** *Philippe Rousseau, Danikel Giroux, Chloé Branconnier, Emile Marineau Bélanger, Jocelyn Lemire, André Bussièrès*

**3:30-4:00 Break**

4:00-5:00 Closing Plenary

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**Saturday, March 23, 2024 1:30-3:30 Scientific Platforms I Coral 4**

## Improving Patient Care: Insights from Clinical Case Reports

Chiropractors must be prepared for a wide variety of patient presentations and must be knowledgeable about unusual signs and symptoms that may underly a serious or life-threatening conditions. In this grand round-style session, we will discuss how chiropractors identify uncommon or complicated patient cases and discuss what to do in these clinical situations. We will review cases and discuss the outcomes of chiropractic care.



Moderator  
Brittney Walters  
VA Western New York  
Healthcare System



Moderator  
Weston Holzinger  
Logan University



Moderator  
Claire Johnson  
Brighthall,  
ACCRCAC Peer  
Review Chair

### Research Presentations:

- **Spinal ependymoma presenting as subtle neurological findings in a Veterans Administration chiropractic clinic: A case report in differential diagnosis and appropriate use of diagnostic imaging**  
*Olivia Poppen, Alyssa Troutner, Christopher Farrell, Lindsay Rae*
- **Chiropractic triage at primary care for degenerative cervical myelopathy: A case report**  
*Derrick Bark, Jevinne Khan, Patrick Battaglia*
- **Chiropractic care for a posterior tibialis tendon rupture in transgender male athlete: A case report**  
*Faith Truthan, Noah Hass, Aidan O'Brien, Daniel Haun, Norman Kettner*
- **Non-surgical management of post vasectomy pain syndrome: A case study involving chiropractic care**  
*Antonio Figueroa, Jr., Nathan Hinkeldey, Heather Meeks, Mandy Wong, Jeffrey Remsburg*
- **Treatment of chronic myofascial pain following schwannoma resection: A case report**  
*Jeffrey Remsburg, Heather Meeks, Mandy Wong, Nathan Hinkeldey*
- **Bilateral leg pain in a high school soccer player: A case report**  
*Jose Balseca, Amanda Balseca*
- **Extensive isolated paraspinal atrophy: A case report and literature review**  
*Hang Nguyen, Sherman Rhee*
- **Integrated chiropractic-medical management of neurogenic bowel syndrome in a syringomyelia case in India: A case study**  
*Tanmay Shinde, Charles Henderson, Monica Smith*
- **Radial nerve schwannoma diagnosed with point of care ultrasound at a chiropractic school outpatient clinic: A case report**  
*David D. Crespo-Rivera, Jake Halverson, Mayda Serrano-Alvida*
- **A case of kidney injury secondary to a drug-drug interaction presenting as low back pain: A case report**  
*Nicolas M. Littzi, Amy Kowalczyk*
- **Management of foot drop with instrument assisted soft tissue manipulation: A case report**  
*Nathan Hinkeldey, Chloe Goodwin, Aaron Meyer, Heather Meeks, Jeffrey Remsburg, Mandy Wong*
- **Chiropractic as complementary care for patients with multiple sclerosis: A case report**  
*Maria Elena Garcia-Carballo, Maria Eugenia Dueño Berrios, Mayda Serrano Alvira*

**3:30-4:00 Break**

4:00-5:00 Closing Plenary



## POSTER ABSTRACTS

**Friday, March 22, 2024 posters must be on posterboards by 12 noon**

**Friday, March 22, 2024 Poster session and RECEPTION 6:00 to 7:30 pm**

**Saturday, March 23, 2024 Poster session 10:00 to 10:30am (take down poster at end of Saturday session)**



*Posters are listed alphabetical by first author last name. At the conference, posters will be assigned boards.*

**An exploration of the relationship between quality of life and associated factors in women attending care in a chiropractic practice-based research network**

*Joel Alcantara, Andrew Whetten, Elizabeth Emmanuel, Sandra Grace, Stephen Myers*

**A 5 ½ month old female treated for plagiocephaly/brachycephaly with Sacro Occipital Technique cranial protocols: A case report**

*Olga Alvarez*

**Effects of chiropractic care on sputum and hair cortisol levels in children with subclinical spinal pain: A randomized controlled trial**

*Imran Amjad, Imran Khan Niazi, Nitika Kumari, Usman Rashid, Usman Ghani, Kelly Holt, Heidi Haavik*

**Paraffin bath therapy for de Quervain's tenosynovitis and arthritis after failed injection therapy: A case report**

*Isabehl Ascher*

**Management of atypical lumbar radicular pain only provoked with neck rotation movements in a Veteran: A case report**

*Shery Assal, Acker, M. Tyler*

**Chiropractic management of a 38-year-old male veteran with acute low back pain presenting to the emergency department: A case report**

*Annie Babikian, Robert Walsh, Alec Schielke*

**Developing and validating scales phase 1: Radiographic visual perception test**

*Michele Bahadoor*

**A quality improvement project to develop and implement a comprehensive chart review and communication tool for Veteran Affairs chiropractic trainees**

*Tyler Barton, Alex Pham, Clinton Daniels*

**Efficacy of novel wave therapy for various causes of chronic back and neck pain**

*Karim Bayanzay, Peter Dyback, Myron Moskalyk, Aslam Khan*

**Morphometric and non-morphometric evaluation in a pathology skull collection: A pilot study**

*Megan Beveridge, Emily Speer, Katie Manley-Buser, Judy Bhatti, Roger Hynes, Steve Duray*

**Chiropractic and dental integrative care for 52-year-old male stroke victim suffering from chronic temporomandibular joint dysfunction: A case report**

*Thomas Bloink, Charles Blum*

**Treatment of a grade III anteriolisthesis of a 28-year-old female: A case report**

*Charles Blum*

**Chiropractic care of a 6-year-old male child presenting with severe eye trauma: A case report**

*William Boro*

**A scoping review of cervical mechanical traction protocols, effectiveness and use in virtual care**

*Frank M Bucki, Clarice Wallert, Jessica Tom*

**The impact of neck pain on gait health: A systematic review and meta-analysis**

*Wren Burton, Yan Ma, Brad Manor, Jeffrey Hausdorff, Matthew Kowalski, Paul Bain, Peter Wayne*

**Chiropractic clinical registries: A scoping review**

*Joel Carmichael, Kent Stuber, Katherine Pohlman, Amy Ferguson, Michele Maiers*

**Scapular pain in cervical radiculopathy: A scoping review**

*Joel Carmichael, Kenneth Weber II, Sidney Rubinstein, Ellie Svoboda, Michael Bade,*

**Access to chiropractic services and spinal manipulation for Medicaid patients: A critical analysis**

*Cynthia Chapman*

**Chiropractic students' perception of readiness for clinical practice following a Veterans Affairs chiropractic clerkship: A pilot study**

*Michael R. Cole II, Brittany Pase, Charles Penza*

**Management of diabetic neuropathy with low level laser therapy in an 81-year-old male: A case report**

*Callyn Dittmar*

**Experiential learning exercise: Lessons learned for curriculum development**

*Scott Dunham, Christine Bradaric-Baus, Cirene D'Monte, David Starmer, Dominic Giuliano, Kim Ross, Alex Lee*

**The treatment of a 39-year-old veteran with lumbar spinal stenosis utilizing flexion-distraction, manual therapies, and core exercises: A case report**

*Charles R. Elchert, Casey J. Rogers*

**Functional recovery following traumatic brain injury in rats is enhanced by oral supplementation with bovine thymus extract**

*Natalia Surzenko, Johana Bastidas, Robert W. Reid, Julien Curaba, Wei Zhang, Hamed Bostan, Mickey Wilson, Ashley Dominique, Julia Roberson, Glicerio Ignacio, Slavko Komarnytsky, Alexa Sanders, Kevin Lambirth, Cory R. Brouwer, and Bassem F. El-Khodor*

**Communication-based interventions, psychotherapy in chronic musculoskeletal pain: A narrative review**

*Sydney Ernst, Jason Napuli, Anna-Marie Ziegler*

**Musculoskeletal rehabilitation professions and the management of spinal manifestations of diffuse idiopathic skeletal hyperostosis: A scoping review**

*William Foshee, Michael Fergus, Katie Benson, Jeff Miller, Brenna Gray, Eric Daniel*

**Chiropractic continuing education: A descriptive analysis of cultural competence and special health topics requirements**

*William Foshee, Danielle Howard, Maria Buscemi, Nakiesha Pearson*

**A hidden ganglion cyst: A case report**

*Leslie Fuller, Melinda Novak*

**Twists and turns evolving clinical decision-making for intermittent cervical spine symptoms in the presence of vascular anomalies and other complicating factors: A case report**

*Jessy Glaub, Christopher Arick, Eric Kirk*

**Healthcare overspend insights from a hands-on assessment and chiropractic care for uninterrupted cervicogenic headaches: A case report**

*Jessy Glaub, Michael McQueen, Christopher Arick, Eric Kirk*

**Results from the ACCRAC 2023 workshop business education for chiropractors part 1: Building a foundation**

*Brian J Gleberzon, Michael Ciolfi, Ayla Azad*

**Development of entrustable professional activities at 2 community-based chiropractic student preceptorship sites**

*Jordan A. Gliedt, Kevin S. Mathers, Jeff King, Michael J. Schneider, Michael R. Wiles*

**Brain neurotransmitter imbalance in central sensitization and chronic pain in vivo using 1h-mrs: A narrative review**

*Noah Hass, Janelle Goss, Norman Kettner*

**Chiropractic care and research priorities for the pediatric population: A cross-sectional survey of Quebec chiropractors**

*Rebecca Hayes, Camille Imbeau, Katherine A Pohlman, Marc-André Blanchette, Chantale Doucet*

**Content validation of globally scored chiropractic basic and clinical sciences exams: a Delphi study**

*Igor Himelfarb, Bruce L. Shotts, Andrew R. Gow*

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