



18TH WORLD FEDERATION OF
CHIROPRACTIC BIENNIAL CONGRESS
RESEARCH AWARDS



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I B C E

INTERNATIONAL BOARD OF
CHIROPRACTIC EXAMINERS

INTRODUCTION

The 18th World Federation of Chiropractic (WFC) Biennial Congress once again highlighted the critical role of research in advancing the science, education, and clinical practice of chiropractic. At the centre of this year's Congress were the prestigious research awards, recognising excellence, innovation, and global contribution to the chiropractic profession.

The WFC-NCMIC Louis Sportelli Research Paper Awards, generously sponsored by NCMIC Inc., honored exceptional original research with clear potential to impact the field. Named in recognition of Dr. Louis Sportelli, whose lifelong service and leadership have significantly shaped the profession—these awards aim to support high-quality, evidence-based chiropractic research. In 2025, a total of \$25,500 USD in prize money was awarded to outstanding researchers for their contributions.

Complementing this, the Poster Awards, sponsored by the International Board of Chiropractic Examiners (IBCE), recognized visually engaging and scientifically sound research posters. These awards provided an important platform for both emerging and established researchers to present their findings in an accessible and impactful format.

This year, a total of 186 abstracts were received. Following a rigorous peer review process, 72 abstracts were selected for platform presentation, while 102 were invited as posters. The high volume and quality of submissions reflect the continued growth, engagement, and scientific maturity of the global chiropractic research community.

Eligibility for the research awards required



acceptance through this initial peer-review process, followed by submission to a dedicated award competition. Oversight of the process was led by Co-Chairs Professor Sidney Rubinstein and Dr. Henrik Wulff Christensen, with additional review by Professor Richard Brown and Dr. Claire Johnson. The judging panel comprised internationally respected researchers, including:

- Dr. Michael Schneider– University of Pittsburgh, inaugural Director of the chiropractic program;
- Dr. Keseri Padayachy– KwaZulu-Natal, South Africa, focused on musculoskeletal health data;
- Dr. Peter Wayne– Harvard Medical School and Osher Center for Integrative Medicine;
- Dr. Michael Swain– Macquarie University, Australia.

Through a multi-step evaluation using a rigorous scoring system, the most impactful and methodologically sound research was selected for recognition. This report outlines the award process and celebrates the recipients whose work is helping to shape the future of chiropractic care worldwide.



NCMIC-JMPT RESEARCH AWARDS

The NCMIC-JMPT Louis Sportelli Research Awards are among the most prestigious honors in chiropractic research, established to recognize excellence, innovation, and meaningful contribution to the advancement of the chiropractic profession. These awards are jointly supported by NCMIC, a long-standing advocate for chiropractic professionals, and the Journal of Manipulative and Physiological Therapeutics (JMPT), the leading peer-reviewed journal in the field.

Named in honor of Dr. Louis Sportelli, a chiropractor and internationally respected leader who has dedicated his career to the service, advocacy, and scientific development of the chiropractic profession, the awards reflect his legacy and the shared commitment of the sponsors to fostering a strong research culture within chiropractic.

Presented at the World Federation of Chiropractic (WFC) Biennial Congress, the awards provide a platform for showcasing cutting-edge research to an international audience. In 2025, a total of \$25,500 USD in prize money was awarded to researchers whose work demonstrated outstanding scientific quality, originality, and relevance to chiropractic education, practice, or policy.

The selection process for the awards is highly competitive and rigorous. Submissions begin with abstract review by the Congress's scientific committee. Those accepted for platform presentation are eligible to submit full papers to be considered for the research awards. These papers undergo a multi-stage evaluation process, guided by a panel of internationally recognized experts from academia and clinical research. The judging criteria focus on methodological rigor, innovation, scientific contribution, and potential to impact clinical practice.

Judging oversight is provided by a core committee including experienced research leaders, and all

papers are independently scored to ensure objectivity, transparency, and fairness.

By highlighting and rewarding exceptional research, the NCMIC-JMPT Louis Sportelli Research Awards help to elevate the global profile of chiropractic scholarship and inspire ongoing scientific inquiry. They underscore the essential role of evidence in supporting chiropractic's integration into mainstream health systems and in improving patient care through research-informed practice.

These awards not only honor the researchers themselves, but also reinforce the importance of a collaborative and forward-thinking research community - one that reflects the vision of Dr. Sportelli and the values of both NCMIC and JMPT.



Dr Lou Sportelli

WFC NCMIC LOU SPORTELLI RESEARCH AWARDS



Dr Peter Emary being presented with the Scott Haldeman Award for Research Excellence
L>R: Claire Johnson (NCMIC), Peter Emary, Scott Haldeman

Scott Haldeman Award for Outstanding Research (US\$10,000)

The impact of chiropractic care on prescription opioid use for non-cancer spine pain: a systematic review and meta-analysis

Peter Emary, Kelsey Corcoran, Brian Coleman, Amy Brown, Carla Ciraco, Jenna DiDonato, Li Wang, Rachel Couban, Abhimanyu Sud, Jason Busse

This systematic review and meta-analysis evaluated whether chiropractic care reduces prescription opioid use in adults with non-cancer spine pain. Researchers analyzed data from 2 randomized controlled trials (838 participants) and 18 cohort studies (over 5.2 million participants). The findings suggest that chiropractic care, compared to standard medical care alone, may be associated with significantly lower odds of receiving prescription opioids - by 34% to 65% - and a 73% reduction in the odds of initiating long-term opioid use. Absolute reductions ranged from 10% to 16% for initiating opioid use and 3% for long-term use. Despite these promising trends, the overall certainty of evidence was rated as very low due to methodological limitations and study heterogeneity. The authors conclude that while chiropractic care may help reduce opioid reliance for spine-related pain, high-quality randomized controlled trials are necessary to confirm these outcomes and establish stronger clinical and policy guidance.



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WFC NCMIC LOU SPORTELLI RESEARCH AWARDS

NCMIC-JMPT Research Award (US\$6,250)

Update Of A Cochrane Review: Spinal Manipulative Therapy For Chronic Low-Back Pain

Annemarie De Zoete, Tiziano Innocenti, John Petrozzi, Marienke van Middelkoop, Pim Assendelft, Michiel de Boer, Maurits van Tulder, Sidney Rubinstein

This updated Cochrane review assessed the effectiveness and safety of spinal manipulative therapy (SMT) for chronic low-back pain (LBP), incorporating evidence up to October 2024. A total of 76 randomized controlled trials (11,866 participants) were included, though many recent studies were small in size. Compared to no treatment, SMT provided moderate pain relief and functional improvement. When compared to sham or placebo SMT, the effects were smaller—showing minimal pain relief and modest functional gains. Against other conservative treatments, SMT showed a small benefit for both pain and function. Overall, the certainty of evidence ranged from very low to low. Adverse events, reported in 32 studies, were generally mild to moderate and related to musculoskeletal effects. The findings are consistent with the 2019 BMJ review, indicating SMT may be a reasonable option for chronic LBP. The authors recommend halting further small RCTs to avoid research redundancy and focus on higher-quality studies.



Award winners at the 18th WFC Biennial Congress, held May 7-10, Copenhagen, Denmark



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WFC NCMIC LOU SPORTELLI RESEARCH AWARDS

NCMIC-JMPT Research Award (US\$6,250)

Patient safety culture research within the chiropractic profession: a scoping review

Debbie Wright, Maranda Kleppe, Brian Coleman, Martha Funabashi, Amy Ferguson, Richard Brown, Sidney Rubinstein, Katherine A Pohlman, Stacie Salsbury

This scoping review explored research trends, themes, and gaps related to patient safety culture within the chiropractic profession. A comprehensive search of five databases up to December 2024 identified 64 relevant studies published between 1990 and 2024, with only two randomized controlled trials. Seven key themes emerged: adverse event research, clinical trial safety reporting, patient safety attitudes, clinical decision-making, informed consent, reporting and learning systems, and office sanitization/general safety topics. Most studies focused on safety performance (95%) and strategies (66%), with fewer addressing safety climate (48%) and core beliefs/values (23%). When mapped against the WHO Global Patient Safety Action Plan, key gaps included patient engagement, leadership, policy development, and interprofessional collaboration. The review calls for standardized adverse event reporting, enhanced communication, and evidence-based interventions to strengthen patient and workforce safety. Findings highlight the need to build a more robust safety culture in chiropractic, essential for improving transparency and reinforcing public trust in the profession.

NCMIC New Investigator Award (US\$3,000)

Evaluation of National Musculoskeletal Health Policies in the United Kingdom: A Policy Analysis.

Faye Deane, Michelle Maiers, Daniel Moore, Paul Chesterton, Ryan Cormac, Amelia Lake, Denis Martin

This policy analysis evaluated national musculoskeletal (MSK) health policies in the United Kingdom to identify opportunities for sustainable healthcare improvements. Using Arksey and O'Malley's policy mapping framework and Walt & Gilson's Policy Analysis Triangle, five relevant policy documents (2016–2025) were identified from a review of 6,511 sources. Six key themes emerged: prevention, integrated and person-centred care, equity, workforce development and collaboration, digital innovation, and systemic challenges. Prevention was a dominant focus, emphasizing patient empowerment, self-management, and alignment with public health strategies. Workforce development aimed to address regional disparities in MSK care delivery. However, the analysis revealed significant gaps, including limited attention to rehabilitation, pain management, and implementation processes. Policies were heavily content-focused, often lacking clear, actionable strategies for real-world application. The study concludes that future MSK health policies should prioritize equitable, patient-centred outcomes, include robust implementation frameworks, and better integrate MSK care into broader health systems to achieve meaningful and sustainable impact across the UK.



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WFC NCMIC LOU SPORTELLI RESEARCH AWARDS

Honorable Mention

Association of cognitive impairment and spinal pain in the older adult population in the United States: A secondary analysis of cross-sectional data from the 1999-2000 and 2001-2002 National Health and Nutrition Examination Survey

Katie de Luca, Haiou Yang, Scott Haldeman, Eric Hurwitz, Patricia Tavares, Bart Green, Hannah Dale

Honorable Mention

Lumbar intervertebral disc deformation during spinal manipulative therapy

Martha Funabashi, Daniel Kim, Kieran Bennett, Dhara Amin, Gregory Kawchuk, John Costi

Honorable Mention

Trajectories of primary healthcare utilization in Danish adults with spinal pain: a cohort study

Casper Nim, Jan Hartvigsen, Christian Skovsgaard, Alice Kongsted, Aron Downie, Stine Clausen

Honorable Mention

How do patient-reported visual pain trajectories relate to patients' SMS-measured pain patterns?

Michelle Frederiksen, Aron Downie, Alice Kongsted, Casper Nim

Honorable Mention

Longer-term Outcomes of Chiropractic Care for US Active-duty Military Personnel with Low Back Pain from a Pragmatic Clinical Trial Subsample

Zacariah Shannon, Cynthia Long, Robert Vining, Jacob McCarey, Christine Goertz

Honorable Mention

From skepticism to integration: Adoption of mobile health apps in Danish Chiropractic practice – a mixed methods study

Mette Sørensen, Madalina Jaeger, Mette Stochkendahl



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IBCE RESEARCH AWARDS



L>R Katherine Pohlman, Sidney Rubinstein, Karlos Boghosian (President of IBCE)

The International Board of Chiropractic Examiners (IBCE) proudly sponsored the Poster Awards Competition at the 18th World Federation of Chiropractic (WFC) Biennial Congress, held in Copenhagen, Denmark. This competition formed an integral part of the Congress's commitment to advancing chiropractic research and promoting excellence in scientific communication.

Poster presentations played a vital role in the Congress program. As a widely used format in scientific conferences, posters allowed researchers to present their work in a concise, visually engaging, and accessible manner. They encouraged scholarly dialogue, peer-to-peer learning, and opportunities for networking,

particularly for early-career researchers and those presenting preliminary or practice-based findings.

Following a rigorous peer-review process, a total of 102 abstracts were invited to present as posters at the Congress. All accepted posters were automatically entered into the IBCE Poster Awards Competition, which aimed to recognize outstanding contributions to chiropractic science and practice.

Three award categories were offered. The First Prize, valued at US\$3,000, was awarded to the most outstanding poster overall. The Second Prize of US\$1,750 recognized the next highest-ranked submission. In addition, Best in Region awards of US\$750 were presented to top posters representing each of the WFC's seven world regions: Africa, Asia, Eastern Mediterranean, Europe, Latin America, North America, and the Pacific.

Posters were evaluated by an international panel of judges with expertise in chiropractic research, clinical practice, and education. Judging criteria included originality, methodological quality, clarity and visual presentation, relevance to chiropractic and musculoskeletal health, and overall impact.

The IBCE Poster Awards served not only to honour individual excellence but also to highlight the global breadth of chiropractic research and the value of knowledge sharing across cultures and health systems. The WFC expressed its sincere gratitude to the IBCE for its generous support of this initiative, which continues to elevate the visibility, credibility, and scientific strength of the chiropractic profession worldwide.



IBCE RESEARCH AWARDS

Best Overall Poster (US\$3,000)

Incidence of spinal radiculopathy and surgery among Danes aged 6-17 years: A nationwide population-based cohort study

Casper Nim

This nationwide cohort study investigated the incidence of spinal radiculopathy and related surgeries among Danish children and adolescents aged 6–17 years from 2009 to 2021. Using comprehensive national registry data, the study identified 873 individuals diagnosed with spinal radiculopathy, with annual incidence rates ranging from 4.5 to 9.3 per 100,000. Surgical intervention was rare: only 16 patients underwent spine-related surgery (discectomy, decompression, or fusion), resulting in an incidence density of 2.4 surgeries per 1,000 person-years. Among those who had surgery, the median time from diagnosis to procedure was just 4 days. These findings confirm that spinal radiculopathy in this age group is uncommon, and when it does occur, it is typically managed non-surgically. However, clinicians - including chiropractors and other primary care providers—should remain aware of the condition to ensure timely diagnosis and appropriate referral when needed. This study provides important baseline data for understanding the burden and management of pediatric radiculopathy in Denmark.



L>R Katherine Pohlman, Casper Nim, Sidney Rubinstein, Karlos Boghosian
(President of IBCE)

IBCE RESEARCH AWARDS

Second Prize (US\$1,750)

A qualitative study exploring the experiences of chiropractors of the Sports and Exercise Research Collaborative for Health Practice-based Research Network (SERCH-PBRN) conducting research in their clinical practices.

Alexander Lee

WFC African Region (US\$750)

A Comparison of MHSc Chiropractic Students and Emergency Care Practitioners' Ability to Diagnose Emergency and Musculoskeletal Pathologies: A Pilot Study

Christopher Yelverton

WFC Asian Region (US\$750)

Exploring the Stakeholders' Perceptions of the Factors Influencing Chiropractic Care Utilisation Among Blue-Collar Workers: Implications for Improved Musculoskeletal Health Outcomes

Natalie Ziqing Chin



L>R Katherine Pohlman, Natalie Ziqing Chin, Sidney Rubinstein, Karlos Boghosian (President of IBCE)

IBCE RESEARCH AWARDS

WFC Eastern Mediterranean Region (US\$750)

[No poster received]

WFC European Region (US\$750)

'Am I not going to talk to any medical doctors today?' Effective and ineffective interactional practices in spinal pain clinic consultation.

Lise Hestbaek



L>R Katherine Pohlman, Lise Hestbaek, Sidney Rubinstein, Karlos Boghosian (President of IBCE)

IBCE RESEARCH AWARDS

WFC Latin American Region (US\$750)

Correlation Between Student Performance on National Chiropractic Boards Part I and the Innovative Curriculum of the School of Chiropractic at UCC in Puerto Rico

Kimberleve Rolon-Reyes

WFC North American Region (US\$750)

A qualitative analysis of the recovery trajectory following a pre-operative rehabilitation program for symptomatic lumbar spinal stenosis surgery

Nora Bakaa

WFC Pacific Region (US\$750)

From Adjustment to Insight: EHR Data Quality Assessments for Chiropractic Research

Melinda Wassell



L>R Katherine Pohlman, Kimberleve Rolon-Reyes, Sidney Rubinstein, Karlos Boghosian (President of IBCE)

Acknowledgment

The WFC gratefully acknowledges the invaluable contributions of the 75 peer reviewers who generously volunteered their time and expertise to review abstracts submitted for the 18th Biennial Congress. Their careful evaluations ensured the scientific quality, relevance, and integrity of the program and played a critical role in showcasing the breadth and depth of global chiropractic research. We also extend our sincere thanks to Claire Johnson of Brighthall Inc., whose leadership and coordination of the WFC-NCMIC Louis Sportelli Research Awards were instrumental to the success of this year's competition. Her commitment to excellence and meticulous oversight helped uphold the rigorous standards of the award process and ensured its smooth and professional delivery.

