

STEPHEN KINGWELL, BScPT, MD, MScHS, FRCSC

1053 Carling Ave., Ottawa, ON, K1Y 4E9

Ottawa Hospital-Civic Campus

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Languages: English and French

PROFESSIONAL APPOINTMENTS

2009-present Assistant Professor Orthopedic Surgery, Ottawa Hospital-Civic Campus, University of Ottawa, Ottawa, Ontario

2008-2009 Orthopedic Surgery Locum, Peace Arch Hospital, Fraser Health Authority, White Rock, British Columbia

POSTGRADUATE MEDICAL EDUCATION

2007-2009 Spine Surgery Fellowship, Combined Neurosurgical and Orthopaedic Spine Program, Vancouver General Hospital, University of British Columbia

2006-2007 Chief Resident, Orthopaedic Surgery, Ottawa Hospital, University of Ottawa

2002-2007 Orthopaedic Surgery Residency, Ottawa Hospital, University of Ottawa

POSTGRADUATE EDUCATION

2017-2021 Masters of Science in Health Systems, Telfer School of Management, University of Ottawa

UNDERGRADUATE MEDICAL EDUCATION

1998-2002 Doctor of Medicine, Queen's University

UNDERGRADUATE EDUCATION

1994-1998 Bachelor of Science, Physical Therapy, McGill University
With distinction

PROFESSIONAL COMMITTEES AND ADMINISTRATIVE ROLES

2020-present Fellowship Director, Combined Orthopedic and Neurosurgical Spine Fellowship, University of Ottawa

2016-present Spine Representative, Orthopedic Patient Safety and Quality Improvement Committee, Ottawa Hospital

2020-present Surgical Representative, Infection Prevention and Control Committee, Ottawa Hospital

- 2018-2020 Divisional Representative, Orthopedic Surgery Executive Committee, Ottawa Hospital
- 2013-2017 Comprehensive Unit-Based Safety Program (CUSP) lead for Orthopedic Surgery, Ottawa Hospital

MEDICAL LICENCES

- 2009-present College of Physicians and Surgeons of Ontario (Independent Practice)
- 2007-present Fellow of the Royal College of Physicians and Surgeons of Canada
- 2007-2009 College of Physicians and Surgeon of British Columbia
- 2002-2007 College of Physicians and Surgeons of Ontario (Resident)

PUBLICATIONS/RESEARCH

Journal Articles

Canturk TC, Czikk D, Wai EK, Phan P, Stratton A, Michalowski W, **Kingwell S**. A scoping review of complication prediction models in spinal surgery: An analysis of model development, validation and impact. *N Am Spine Soc J*. 2022 Jul 14;11:100142. doi: 10.1016/j.xnsj.2022.100142. eCollection 2022 Sep. PMID: 35983028

Falsetto A, Roffey DM, Jabri H, **Kingwell SP**, Stratton A, Phan P, Wai EK. Allogeneic blood transfusions and infection risk in lumbar spine surgery: An American College of Surgeons National Surgery Quality Improvement Program Study. *Transfusion*: 62(5):1027-1033, 2022.

Wang S, Hebert JJ, Abraham E, Vandewint A, Bigney E, Richardson E, El-Mughayyar D, Attabib N, Wedderkopp N, **Kingwell S**, Soroceanu A, Weber MH, Hall H, Finkelstein J, Bailey CS, Thomas K, Nataraj A, Paquet J, Johnson MG, Fisher C, Rampersaud YR, Dea N, Small C, Manson N. Postoperative recovery patterns following discectomy surgery in patients with lumbar radiculopathy. *Sci Rep*. 2022 Jul 1;12(1):11146. doi: 10.1038/s41598-022-15169-8. PMID: 35778472

D. O'Sullivan, W. Van Woensel, Sz. Wilk, S. W. Tu, W. Michalowski, S. Abidi, M. Carrier, R. Edry, I. Hochberg, **S. Kingwell**, A. Kogan, M. Michalowski, H. O'Sullivan, M. Peleg, 2021 "Towards a Framework for Comparing Functionalities of Multimorbidity Clinical Decision Support: A Literature-based Feature Set and Benchmark Cases" *AMIA Annu Symp Proc* 2021, 919-928.

Hathi K, Bigney E, Richardson E, Alugo T, El-Mughayyar D, Vandewint A, Manson N, Abraham E, Small C, Thomas K, Fisher CG, Rampersaud YR, Hall H, McIntosh G, Johnson MG, Bailey CS, Weber MH, Paquet J, **Kingwell S**, Nataraj A, Finkelstein J, Kelly A, Attabib N. Minimally Invasive vs. Open Surgery for Lumbar Spinal Stenosis in Patients with Diabetes - A Canadian Spine

Outcomes and Research Network Study. *Global Spine J.* 2021 Aug 31;21925682211042576. doi: 10.1177/21925682211042576.

DeVries Z, Locke E, Hoda M, Moravek D, Phan K, Stratton A, **Kingwell S**, Wai EK, Phan P. Using a national surgical database to predict complications following posterior lumbar surgery and comparing the area under the curve and F1-score for the assessment of prognostic capability. *Spine J.* 21(7):1135-1142, 2021

Michalowski M, Wilk S, Michalowski W, O'Sullivan D, Bonaccio S, Parimbelli E, Carrier M, Le Gal G, **Kingwell S**, Peleg M. A Health eLearning Ontology and Procedural Reasoning Approach for Developing Personalized Courses to Teach Patients about Their Medical Condition and Treatment. *Int J of Environ Research and Public Health.* 18,7355: 1-29, 2021.

Parimbelli E, Szymon W, O'Sullivan D, **Kingwell S**, Michalowski W, Michalowski M. How Do Spinal Surgeons Perceive The Impact of Factors Used in Post-Surgical Complication Risk Scores? *AMLA Annu Symp Proc* 2020 Mar 4; 699-706, 2020.

Bond M, Evaniew N, Bailey CS, Glennie RA, Paquet J, Dea N, Hall H, Manson N, Thomas K, McIntosh G, Soroceanu A, Abraham E, Johnson M, **Kingwell S**, Charest-Morin R, Christie S, Rampersaud YR, Fisher CG; Canadian Spine Outcome and Research Network. Back pain in surgically treated degenerative lumbar spondylolisthesis: what can we tell our patients? *Spine J.* 20(12): 1940-1947, 2020.

Garland K, Chen BP, Poitras S, Wai EK, **Kingwell SP**, Roffey DM, Beaulé PE. Capturing adverse events in elective orthopedic surgery: comparison of administrative, surgeon and reviewer reporting. *Can J Surg.* 2020 63(1):E35-E37, 2020.

Stratton A, Wai E, **Kingwell S**, Phan P, Roffey D et al. Opioid use and trends in patients undergoing elective thoracic and lumbar spine surgery. *Can J Surg.* 63(3): E306-E312, 2020.

DeVries Z, Hoda M, Rivers CS, Maher A, Wai E, Moravek D, Stratton A, **Kingwell S**, Fallah N, Paquet J, Phan P; RHSCIR Network. Development of an unsupervised machine learning algorithm for the prognostication of walking ability in spinal cord injury patients. *Spine J.* S1529-9430(19)30971-4, 2019.

Phan K, Phan P, Stratton A, **Kingwell S**, Hoda M, Wai E. Impact of resident involvement on cervical and lumbar spine surgery outcomes. *Spine J.* 19(12):1905-1910, 2019.

Parimbelli E, Wilk S, **Kingwell S**, Andreev P, Michalowski W. Shared Decision-Making Ontology for a Healthcare Team Executing a Workflow, an Instantiation for Metastatic Spinal Cord Compression Management. *AMLA Annu Symp Proc.* 2018 Dec 5;:877-886, 2018.

Coyle MJ, Roffey DM, Phan P, **Kingwell SP**, Wai EK. The Use of a Self-Administered Questionnaire to Reduce Consultation Wait Times for Potential Elective Lumbar Spinal Surgical Candidates: A Prospective, Pragmatic, Blinded, Randomized Controlled Quality Improvement Study. *J Bone Joint Surg Am,* 100(24):2125-2131, 2018.

Zeglinski-Spinney A, Wai DC, Phan P, Tsai EC, Stratton A, **Kingwell SP**, Roffey DM, Wai EK. Increased prevalence of chronic disease in back pain patients living in car-dependent neighbourhoods in Canada: A cross-sectional analysis. *Journal of Preventative Medicine and Public Health*, 51: 227-233, 2018.

Hashem LE, Roffey DM, Alfasi AM, Papineau GD, Wai DC, Phan P, **Kingwell SP**, Wai EK. Exploration of the inter-relationships between obesity, physical inactivity, inflammation and low back pain. *Spine*, 43(17): 1218-1224, 2018.

Layne EI, Roffey DM, Coyle MJ, Phan P, **Kingwell SP**, Wai EK. Activities performed and treatments conducted before consultation with a spine surgeon: are patients and clinicians following evidence-based practice guidelines. *Spine J.* 18(4):614-619, 2018.

Sniderman JA, Roffey DM, Lee R, Papineau GD, Miles IH, Wai EK, **Kingwell SP**. Treatment options for back pain provided online in Canadian magazines: Comparison against evidence from a clinical practice guideline. *Health Education Journal.* 76(7): 818-828, 2017.

Chen BP; Garland K; Roffey DM; Poitras S; Dervin G; Lapner P; Phan P; Wai EK; **Kingwell SP**; Beaulé PE. Can Surgeons Adequately Capture Adverse Events Using the Spinal Adverse Events Severity System (SAVES) and OrthoSAVES?. *Clinical Orthopaedics & Related Research.* 475(1):253-260, 2017.

Le V, Roffey DM, **Kingwell SP**, Phan P, Macpherson P, Desjardins M, Wai EK. A double-blinded randomized controlled trial of incise-drapes in spine surgery: A feasibility study. *Canadian Journal of Infection Control.* 32(4): 199-205, 2017.

Tice A, Roffey DM, **Kingwell SP**, Phan P, Wai EK. Bone substitutes: Basic science, options, benefits/risks and relative cost. *COA Bulletin.* 109: 25-27, 2015.

Eipe N; Fossey S; **Kingwell SP**. Airway management in cervical spine ankylosing spondylitis: Between a rock and a hard place. *Indian J Anaesthesia.* 57(6):592-5, 2013.

Melnyk AD, **Kingwell SP**, Zhu Q, Chak JD, Cripton PA, Fisher CG, Dvorak MF, Oxland TR. An in vitro model of degenerative lumbar spondylolisthesis. *Spine.* 38(14): E870-7, 2013.

Melnyk AD, Wen TL, **Kingwell S**, Chak JD, Singh V, Cripton PA, Fisher CG, Dvorak MF, Oxland TR. Load transfer characteristics between posterior spinal implants and the lumbar spine under anterior shear loading: an in vitro investigation. *Spine.* 37(18): E1126-33, 2012.

Firth GB, **Kingwell SP**, Moroz PJ. Pediatric noncontiguous spinal injuries: the 15-year experience at a level 1 pediatric trauma center. *Spine.* 37(10):E599-608, 2012.

Zhu Q, **Kingwell S**, Li Z, Pan H, Lu WW, Oxland TR. Enhancing pedicle screw fixation in the aging spine with a novel bioactive bone cement: an in vitro biomechanical study. *Spine.* 37(17): E1030-7, 2012.

Wilson DC, Connolly RJ, Zhu Q, Emery JL, **Kingwell SP**, Kitchel S, Cripton PA, Wilson DR. An ex vivo biomechanical comparison of a novel vertebral compression fracture treatment system to kyphoplasty. *Clin Biomechanics*. 27(4): 346-353, 2012.

Kingwell S. Insufficiency fractures of the spine. Non-surgical management. *COA Bulletin*. 92: 22-23, 2011.

Kingwell SP, Noonan V, Fisher CG, Graeb D, Keynan O, Zhang H, Dvorak MF. Relationship of neural axis level of injury to motor recovery and health-related quality of life in patients with a thoracolumbar spinal injury. *J Bone Joint Surg Am*. 92: 1591-1599, 2010.

Poitras P, **Kingwell SP**, Ramadan O, Russel D, Uthoff HK, Lapner P. The effect of posterior capsular tightening on peak subacromial contact pressure during simulated active abduction in the scapular plane. *J Shoulder Elbow Surg*. 19(3):406-413, 2010.

Fisher C, Singh S, Boyd M, **Kingwell S**, Kwon B, Li M, Dvorak M. Clinical and radiographic outcomes of pedicle screw fixation for upper thoracic spine (T1-T5) fractures: a retrospective cohort study of 27 cases. *J Neurosurg Spine*. 10: 207-213, 2009.

Kingwell SP, Curt A, Dvorak MF. Factors affecting neurological outcomes in traumatic conus medullaris and cauda equina injuries. *Neurosurg Focus*. 25(5):E7, 1-9, 2008.

Kingwell S, Buckley RE, Willis N. The association between subtalar joint motion and outcome satisfaction in patients with displaced intraarticular calcaneal fractures. *Foot Ankle Int*. 25: 666-673, 2004.

Book Chapters

Dehghan N, **Kingwell S**, Feibel RJ, Catton ML, Gauthier SM, Smith CD. Orthopedics and Rheumatology, in Chowdhury JH, Merani S (eds): *Essentials for the Canadian Medical Licensing Exam*, Edition 1. Lippincott Williams & Wilkins, 2010, pp 486-525.

Kingwell S, Fisher C. TLICS: Thoracolumbar Distraction Injuries (Seat belt, Chance, and Flexion Distraction Injuries), in Vaccaro AR, Fehlings MG, Dvorak MF (eds): *Management of Spine and Spinal Cord Trauma: An Evidence-Based Analysis*. Thieme, 2010, pp 383-390.

Kingwell SP and Fisher CG. Thoracolumbar Flexion-Distraction Injury, in Bono C, Fisher C (eds): *Prove it! Evidence-Based Approach to Common Spine Problems*. Lippincott Williams & Wilkins, 2010, pp 140-146.

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Invited Presentations

15th Annual Ottawa Trauma Conference, Cervical Spine Precautions in Adults, 2017

Annual Ottawa Neurosurgery Review Course: Subaxial Cervical Spine Injuries, 2012-2019

Instructional Course Lecture: Uncommon Causes of Shoulder and Upper Limb Pain: “The Masqueraders”: The Diagnoses You Don't Want to Miss and How to Manage Them. Canadian Orthopedic Association (COA) 2017 (Ottawa)

Instructional Course Lecture: Predictors of Neurological Recovery after Thoracolumbar Spine Fractures. Canadian Orthopedic Association (COA) 2012 (Ottawa)

Instructional Course Lecture: Complications—Intraoperative and Postoperative Neurological Deficits. Canadian Orthopedic Association 2010 (Edmonton)

Instructional Course Lecture: When to Fuse for Lumbar Spinal Stenosis? Canadian Orthopedic Association 2009 (Whistler)

Peer-Reviewed Presentations and Posters

Eipe N, Fossey S, **Kingwell SP**. Airway Management in Ankylosing Spondylitis—Between a Rock and a Hard Place.

- Poster: Canadian Anesthesiologists' Society 2011 (Toronto)
- International Anesthesia Research Society 2011 (Vancouver)

Kingwell SP, Melnyk A, Dvorak MF, Oxland T. A Biomechanical Model of Degenerative Spondylolisthesis: Results of Pure Shear Testing

- Poster: International Study of the Lumbar Spine 2010 (New Zealand)
- Podium presentation: Canadian Orthopedic Association 2010 (Edmonton)

Kingwell SP, Noonan V, Fisher CG, Graeb D, Keynan O, Zhang H, Dvorak MF. Relationship of Neural Axis Level of Injury to Motor Recovery and Health-Related Quality of Life in Patients with a Thoracolumbar Spinal Injury.

- Podium presentation: Canadian Orthopedic Association 2009 (Whistler)
- Canadian Spine Society 2009 (Ottawa)
- North American Spine Society 2009 (San Francisco)

Kingwell SP, Kuklo T, Fisher C, Lenke LG, Glassman S, Schwender J, Dvorak MF. The Selection of Posterior Rods for Pedicle Screw Instrumented Fusions in the Thoracic, Lumbar and Lumbosacral Spine: An Evidence Based Analysis.

- Podium presentation: Canadian Spine Society 2009 (Ottawa)

Kingwell S, Moroz P. Pediatric noncontiguous spinal injuries at the Children’s Hospital of Eastern Ontario: a fifteen year review.

- Podium presentation: Canadian Orthopedic Association 2008 (Quebec City)

HONOURS AND AWARDS

2022 Resident teacher of the year, Division of Orthopedic Surgery

2007-2009 Canadian Fellowship for New Faculty, University of Ottawa

- 2005, 2007 Doctor Mervin Letts Award for Scholarship, Congeniality, Research
Division of Orthopaedic Surgery, University of Ottawa
- 2007 Dr. Gordon Armstrong Award for Spine
Division of Orthopaedic Surgery, University of Ottawa
- 2007 Award for Trauma
Division of Orthopaedic Surgery, University of Ottawa
- 2007 Anatomy Award
Division of Orthopaedic Surgery, University of Ottawa
- 2006 AOA-OREF Resident Leadership Forum in San Antonio, Texas
Nominated by Division of Orthopaedic Surgery, University of Ottawa
- 2006 First Prize, H.K. Uthoff Research Day, University of Ottawa
“The Effect of Posterior Capsular Tightness on Pressure in the Subacromial Space”
- 2006 Dr. Warren Castle/Dr. Denis Desjardins Award for Hip/Knee Reconstruction,
Division of Orthopaedic Surgery, University of Ottawa
- 2002 Doctor Osler Briggs Dickinson Scholarship (outstanding performance in
surgery), Queen’s University
- 1999, 2000 Adiel Steacy Memorial Scholarship (academic excellence), Queen’s University
- 1994-1998 Hugh Brock Scholarship (academic excellence), McGill University
- 1994 Jim Coode Memorial Scholarship and Bursary (football
achievement and academic excellence), Ottawa

PROFESSIONAL DEVELOPMENT

- 2019 Canadian Spine Society Annual General Meeting
- 2010 COA, Edmonton, Alberta
- 2009 NASS, San Francisco, California
- 2009 COA, Whistler, British Columbia
- 2008 NASS, Toronto, Ontario
- 2008 AO Advanced Concepts in the Management of Spinal Disorders, Sun Valley, Idaho
- 2007 AO Spine Tumor Symposium, Vancouver, British Columbia
- 2007 AO Spine North America Principles and Treatment of Spinal Disorders for Residents and Fellows, Atlanta, Georgia
- 2005 OTA Residents Basic Fracture Course, Ottawa, Ontario
- 2005 Annual Meeting of the American Academy of Orthopaedic Surgeons, Washington, DC
- 2002 ATLS course, Ottawa, Ontario

MEMBERSHIPS AND COMMITTEES

- 2015-present Member Canadian Spine Society
- 2008-2009 BC Medical Association
- 2006-2007 Chief Resident, Postgraduate Medical Education Committee
University of Ottawa
- 2006 Associate Member, Canadian Orthopaedic Association
- 1999-2001 Orientation committee
Medical admissions committee
Queen's University
- 1998-2000 Member, Ordre professionnel des physiotherapeute du Quebec