

NAME: Philippe Phan

POSITION TITLE: Associate Professor of Orthopaedics, University of Ottawa

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of Toronto, Ontario, Canada	H.B.Sc	06/2002	Software Engineering
University of Ottawa, Ontario, Canada	M.D.	05/2006	Medicine
Université de Montréal, Québec, Canada	Residency	06/2011	Orthopedic Surgery
Harvard University, Massachusetts, USA	Fellowship	07-2013	Complex spine
Université de Montréal, Québec, Canada	Ph.D	05/2014	Biomedical Science (Surgery and Artificial intelligence)

A. Personal Statement

I am an orthopedics spine surgeon scientist at the Ottawa Hospital. I have the expertise, leadership and training to complete projects related to new technologies applied to the medical field. I have a strong background in clinical spine research and my main contributions in the literature to date have been in analyzing clinical data using my software engineering background and my work in artificial intelligence.

My clinical expertise is spine surgery with an emphasis in spinal deformity, complex spine reconstruction and minimally invasive spinal fusion.

My current area of research includes prediction of patient recovery following spinal cord injury, spinal cord imaging and analysis of patient reported outcome from multicentric databases.

B. Positions and Honors

Employment and leadership role:

2019-2022	Spine Chair for Canadian Orthopaedics Association (COA)
2018-ongoing	EPIC lead for division of orthopaedics and department of surgery representative
2017-2018	OLIF (Oblique Lateral Interbody Fusion) surgical technique implementation lead
2017-2019	Executive member board of the Canadian Spine Society
2017-ongoing	Ottawa Spine Comprehensive Analytical Network (OSCAN) co-director
2017-ongoing	Osteoporosis fracture screening and prevention TOH, Civic site lead
2013-ongoing	Associate Professor, Department of Surgery, University of Ottawa
2012-2013	Clinical fellow, Department of Orthopaedic Surgery, Harvard University Massachusetts General Hospital and Brigham and Woman's Hospital
2011-2012	Staff orthopaedic surgeon, Montfort Hospital, Ottawa, Ontario
2009-2011	Chief Resident, Division of Orthopaedic Surgery, Université de Montréal
2006-2011	Resident Physician, Division of Orthopaedic Surgery, Université de Montréal

Academic honors:

2018: Canadian orthopaedics Association: Canadian French Belgium Swiss Travelling fellow

2018: Canadian orthopaedics research society

Founders's medal for the best basic science presentation

2012-2013: University of Ottawa international fellowship for new faculty competition (\$41000)

2011: Canadian Spine Society annual meeting Resident's best paper award (\$500)

C. Contribution to Science

1. My early publications investigated the use of artificial intelligence to guide surgical treatment of Adolescent Idiopathic Scoliosis. Specifically, we developed software to guide surgeons in selecting the level of fusions of the spine based on the fusion implication on patient mobility and spinal alignment as measured by pelvic parameters. This work was part of my doctoral thesis.
 - a. **Phan, P.**, et al. (2010). "A decision tree can increase accuracy when assessing curve types according to Lenke classification of adolescent idiopathic scoliosis." *Spine (Phila Pa 1976)* 35(10): 1054-1059.
 - b. **Phan, P.**, et al. (2011). "Computer algorithms and applications used to assist the evaluation and treatment of adolescent idiopathic scoliosis: a review of published articles 2000-2009." *Eur Spine J* 20(7): 1058-1068.
 - c. Mezghani, N., **Phan, P** et al. (2012). "A Kohonen neural network description of scoliosis fused regions and their corresponding Lenke classification." *Int J Comput Assist Radiol Surg* 7(2): 257-264.
 - d. **Phan, P.**, et al. (2013). "Artificial neural networks assessing adolescent idiopathic scoliosis: comparison with Lenke classification." *Spine J* 13(11): 1527-1533.
 - e. **Phan, P.**, et al. (2015). "A rule-based algorithm can output valid surgical strategies in the treatment of AIS." *Eur Spine J* 24(7): 1370-1381.

2. More recent work included research in the field of walking prediction following spinal cord injury. As a contributing member of the Rick Hansen Spinal cord injury registry, we have analyzed this national multi-centric registry and compared our database and prediction ability to landmark work formerly published in *Lancet* by Van Middendorp et al. Our work have triggered much interest from the orthopedics community and we were awarded the best basic science paper at the national conference. To date two papers were published in a leading spinal journal were we described the possibility to predict walking ability using solely three clinical variables but that much uncertainty remains for those patients for which prediction would be of much use; patients with incomplete injuries.
 - a. Hicks KE, Zhao Y, Fallah N, Rivers CS, Noonan VK, Plashkes T, Wai EK, Roffey DM, Tsai EC, Paquet J, Attabib N, Marion T, Ahn H, **Phan P**; RHSCIR Network. A simplified clinical prediction rule for prognosticating independent walking after spinal cord injury: a prospective study from a Canadian multicenter spinal cord injury registry. *Spine J.* 2017 Oct;17(10):1383-1392.
 - b. **Phan P**, et al. (2018) Highlighting discrepancies in walking prediction accuracy for patients with traumatic spinal cord injury: an evaluation of validated prediction models using a Canadian Multicenter Spinal Cord Injury Registry. *Spine J.* 2018 Sep 1.
 - c. DeVries Z, Hoda M, Rivers C, 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.* 2020 Feb 20(2):213-224

3. In addition to the contributions described above, I am participating in the development of a national registry of spinal surgeries that are prospectively collected and focused on patient reported outcome

Addendum #1:

Papers in referred Journals:

- 1- **“Spinal pathology and outcome post-THA: does segment of arthrodesis matter?.”**
 - Arch Orthop Trauma Surg. 2021 Oct 22. doi: 10.1007/s00402-021-04220-4. Epub ahead of print. PMID: 34677633. .
 - Schmidt-Braekling T, Coyle MJ, Dobransky J, Kreviazuk C, Gofton W, Phan P, Beaulé PE, Grammatopoulos G. .
- 2- **“Time to return to work after elective lumbar spine surgery.”**
 - J Neurosurg Spine. 2021 Sep 24;1-9. doi: 10.3171/2021.2.SPINE202051. Epub ahead of print. PMID: 34560636.
 - Singh S, Ailon T, McIntosh G, Dea N, Paquet J, Abraham E, Bailey CS, Weber MH, Johnson MG, Nataraj A, Glennie RA, Attabib N, Kelly A, Hall H, Rampersaud YR, Manson N, Phan P, Thomas K, Fisher CG, Charest-Morin R.
- 3- **“Does the Region of the Spine Involved with Metastatic Tumor Affect Outcomes of Surgical Treatments?”**
 - World Neurosurg. 2021 Dec;156:e139-e151. doi: 10.1016/j.wneu.2021.09.014. Epub 2021 Sep 14. PMID: 345301
 - Truong VT, Al-Shakfa F, Phan P, Newman N, Boubez G, Shedid D, Yuh SJ, Wang Z.
- 4- **“Comparing the Effects of Early Versus Late Exercise Intervention on Pain and Neurodynamic Mobility Following Unilateral Lumbar Microdiscectomy: A Pilot Study.”**
 - Spine (Phila Pa 1976). 2021 Sep 15;46(18):E998-E1005. doi: 10.1097/BRS.0000000000004018. PMID: 34435993. .
 - LeBlanc L, Moldovan ID, Sabri E, Phan P, Agbi C, Mohammed S, AlKherayf F.
- 5- **“Effectiveness of Surgical Decompression in Patients With Degenerative Cervical Myelopathy: Results of the Canadian Prospective Multicenter Study.”**
 - Neurosurgery. 2021 Oct 13;89(5):844-851. doi: 10.1093/neuros/nyab295. PMID: 34382661. .
 - Karim SM, Cadotte DW, Wilson JR, Kwon BK, Jacobs WB, Johnson MG, Paquet J, Bailey CS, Christie SD, Nataraj A, Attabib N, Phan P, McIntosh G, Hall H, Rampersaud YR, Manson N, Thomas KC, Fisher CG, Dea N. .
- 6- **“The impact of pathoanatomical diagnosis on elective spine surgery patient expectations: a Canadian Spine Outcomes and Research Network study**
 - J Neurosurg Spine. 2021 May 21;1-8. doi: 10.3171/2020.11.SPINE201490. Epub ahead of print. PMID: 34020418.
 - Glennie RA, Canizares M, Perruccio AV, Abraham E, Nicholls F, Nataraj A, Phan P, Attabib N, Johnson MG, Richardson E, McIntosh G, Ahn H, Fisher CG, Manson N, Thomas K, Rampersaud YR. .
- 7- **“Differences in Spinopelvic Characteristics Between Hip Osteoarthritis Patients and Controls..”**
 - J Arthroplasty. 2021 Aug;36(8):2808-2816. doi: 10.1016/j.arth.2021.03.031. Epub 2021 Mar 18. PMID: 33846047
 - Innmann MM, Merle C, Phan P, Beaulé PE, Grammatopoulos G.
- 8- **“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. 2021 Jul;21(7):1135-1142. doi: 10.1016/j.spinee.2021.02.007. Epub 2021 Feb 16. PMID: 33601012. .
 - DeVries Z, Locke E, Hoda M, Moravek D, Phan K, Stratton A, Kingwell S, Wai EK, Phan P.
- 9- **“Back Dominant Pain Has Equal Outcomes to Radicular Dominant Pain Following Posterior Lumbar Fusion in Adult Isthmic Spondylolisthesis: A CSORN Study.”**
 - Global Spine J. 2021 Jan 7:2192568220985471. doi: 10.1177/2192568220985471. Epub ahead of print. PMID: 33406898.
 - Alnaghmoosh N, Urquhart J, Raj R, Abraham E, Jacobs B, Phan P, Johnson M, Paquet J, Nataraj A, McIntosh G, Fisher CG, Rampersaud YR, Manson N, Hall H, Rasoulinejad P, Bailey CS.
- 10- **“Opioid use trends in patients undergoing elective thoracic and lumbar spine surgery.”**
 - Stratton A, Wai E, Kingwell S, Phan P, Roffey D, El Koussy M, Christie S, Jarzem P, Rasoulinejad P, Casha S, Paquet J, Johnson M, Abraham E, Hall H, McIntosh G, Thomas K, Rampersaud R, Manson N, Fisher C.
 - Can J Surg. 2020 May 28;63(3):E306-E312. doi: 10.1503/cjs.018218. PMID: 32463627; PMCID: PMC7829003.
- 11- **“How Can Patients With Mobile Hips and Stiff Lumbar Spines Be Identified Prior to Total Hip Arthroplasty? A Prospective, Diagnostic Cohort Study.”**
 - J Arthroplasty. 2020 Feb 20. pii: S0883-5403(20)30190-X. doi: 10.1016/j.arth.2020.02.029. [Epub ahead of print].
 - Innmann MM, Merle C, Phan P, Beaulé PE, Grammatopoulos G.
- 12- **“Development of an unsupervised machine learning algorithm for the prognostication of walking ability in spinal cord injury patients.”**
 - Spine J. 2020 Feb 20(2):213-224

- DeVries Z, Hoda M, Rivers C, Maher A, Wai E, Moravek D, Stratton A, Kingwell S, Fallah N, Paquet J, Phan P; RHSCIR Network.
- 13- **“Impact of resident involvement on cervical and lumbar spine surgery outcomes.”**
 - Spine J. 2019 Jul 16. pii: S1529-9430(19)30875-7..
 - Phan K, Phan P, Stratton A, Kingwell S, Hoda M, Wai E.
- 14- **“Effect of preoperative symptom duration on outcome in lumbar spinal stenosis: a Canadian Spine Outcomes and Research Network registry study.”**
 - Spine J. 2019 Sep;19(9):1470-1477.
 - Cushnie D, Thomas K, Jacobs WB, Cho RKH, Soroceanu A, Ahn H, Attabib N, Bailey CS, Fisher CG, Glennie RA, Hall H, Jarzem P, Johnson MG, Manson NA, Nataraj A, Paquet J, Rampersaud YR, Phan P, Casha S.
- 15- **“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. 2018 Dec 19;100(24):2125-2131
 - Coyle MJ, Roffey DM, Phan P, Kingwell SP, Wai EK.
- 16- **“Increased Prevalence of Chronic Disease in Back Pain Patients Living in Car-dependent Neighbourhoods in Canada: A Cross-sectional Analysis.”**
 - J Prev Med Public Health. 2018 Sep;51(5):227-233. doi: 10.3961/jpmph.18.038. Epub 2018 Aug 10
 - Zeglinski-Spinney A, Wai DC, Phan P, Tsai EC, Stratton A, Kingwell SP, Roffey DM, Wai EK.
- 17- **“Highlighting Discrepancies in Walking Prediction Accuracy for Patients with Traumatic Spinal Cord Injury: an Evaluation of Validated Prediction Models using a Canadian Multi-centre Spinal Cord Injury Registry.”**
 - Spine J. 2018 Sep 1. pii: S1529-9430(18)31104-5. doi: 10.1016/j.spinee.2018.08.016. [Epub ahead of print]
 - Phan P, Budhram B, Zhang Q, Rivers C, Noonan VK, Plashkes T, Wai EK, Paquet J, Roffey DM, Tsai E, Fallah N; RHSCIR Network.
- 18- **“Exploration of the Inter-Relationships Between Obesity, Physical Inactivity, Inflammation, and Low Back Pain.”**
 - Spine (Phila Pa 1976). 2018 Sep 1;43(17):1218-1224.
 - Hashem LE, Roffey DM, Alfasi AM, Papineau GD, Wai DC, Phan P, Kingwell SP, Wai EK.
- 19- **“Activities performed and treatments conducted prior to consultation with a spine surgeon: Are patients and clinicians following evidence-based clinical practice guidelines?”**
 - Spine J. 2018 Apr;18(4):614-619. doi: 10.1016/j.spinee.2017.08.259. Epub 2017 Sep 4
 - Layne EI, Roffey DM, Coyle MJ, Phan P, Kingwell SP, Wai EK
- 20- **“A simplified clinical prediction rule for prognosticating independent walking after spinal cord injury: a prospective study from a Canadian multicenter spinal cord injury registry?”**
 - Spine J. 2017 Jul 14. pii: S1529-9430(17)30329-7. doi: 10.1016/j.spinee.2017.05.031.
 - Hicks KE, Zhao Y, Fallah N, Rivers C, Noonan V, Plashkes T, Wai EK, Roffey DM, Tsai E, Paquet J, Attabib N, Marion T, Ahn H, Phan P; RHSCIR Network.
- 21- **“Can Surgeons Adequately Capture Adverse Events Using the Spinal Adverse Events Severity System (SAVES) and OrthoSAVES?.”**
 - Clin Orthop Relat Res. 2016 Aug 10.
 - Chen BP, Garland K, Roffey D, Poitras S, Dervin G, Lapner P, Phan P, Wai EK, Kingwell S, Beaulé PE.
- 22- **“Evaluating the Extent of Clinical Variability Among Treatment Options for Patients With Adult Spinal Deformity.”**
 - Clin Spine Surg. 2017 Aug;30(7):E864-E870.
 - Phan P, Ploumis A, Hess K, Wood KB
- 23- **“Virtually bloodless posterior midline exposure of the lumbar spine using the "para-midline" fatty plane.”**
 - Eur Spine J. 2016 Mar;25(3):956-62.
 - Moghimi MH, Leonard DA, Cho CH, Schoenfeld AJ, Phan P, Harris MB, Bono CM.
- 24- **“A double-blinded randomized controlled trial of incise-drapes in spine surgery: A feasibility study”**
 - Canadian journal for infection control, 2017, vol 32, issue 4, 199-205

- Vu (Brian) Le, Darren Roffey, Paul Macpherson, Marc Desjardins, Stephen P. Kingwell, Philippe Phan, Eugene K. Wai.
- 25- “A rule-based algorithm can output valid surgical strategies in the treatment of AIS”**
 - Eur Spine J. 2015 Jul;24(7):1370-81.
 - P. Phan, N. Mezghani, J.A. de Guise, H. Labelle
- 26- “Aspirin Versus Heparin for Management of Cerebellar Stroke After Vertebral Artery Dissection Following C1-C2 Fracture-Dislocation.”**
 - Polina Osler, MS; Philippe Phan, MD, FRCSC; Brian Grottkau, MD.
 - JBJS Case Connect, 2014 Aug 13;4(3):e67.
- 27- “Association between the ESR1 -351A>G single nucleotide polymorphism (rs9340799) and adolescent idiopathic scoliosis: a systematic review and meta-analysis.”**
 - Chen S, Zhao L, Roffey DM, Phan P, Wai EK.
 - Eur Spine J. 2014 Jul 31. [Epub ahead of print].
- 28- “Association of rs11190870 near LBX1 with adolescent idiopathic scoliosis in East Asians: a systematic review and meta-analysis.”**
 - By Chen S, Zhao L, Roffey DM, Phan P, Wai EK.
 - Spine J. 2014 May 27. pii: S1529-9430(14)00556-7.
- 29- “Prior abdominal surgery is associated with an increased risk of postoperative complications after anterior lumbar interbody fusion.”**
 - Osler P, Kim SD, Hess KA, Phan P, Simpson AK, Mansfield FL, Berger D, Craveiro VL, Wood KB.
 - Spine (Phila Pa 1976). 2014 May 1;39(10):E650-6. doi.
- 30- “Factors Influencing Surgical Decision Making in Adult Spine Deformity: A Cross-sectional Survey.”**
 - By Avraam Ploumis, Philippe Phan, Kathryn Hess, Kirkham B. Wood.
 - Spine Deformity 2 (2014) 55e60.
- 31- “Artificial neural networks assessing adolescent idiopathic scoliosis: comparison with Lenke classification.”**
 - P. Phan, N. Mezghani, J.A. de Guise, H. Labelle
 - Spine J. 2013 Oct 2. pii: S1529-9430(13)
- 32- “A Computer-Aided Method for Scoliosis Fusion Level Selection by a Topologically Ordered Self Organizing Kohonen Network”**
 - Neila Mezghani, Philippe Phan, Amar Mitiche, Hubert Labelle, Jacques A. de Guise
 - International Journal of Computer assisted radiology and surgery, Vol. 7, No. 2, pp: 257-264, 2012.
- 33- “Computer algorithms and applications used to assist the evaluation and treatment of adolescent idiopathic scoliosis: a review of published articles 2000-2009”**
 - P. Phan, N. Mezghani, C.E. Aubin, J.A. de Guise, H. Labelle
 - Eur Spine J. 2011 Jul;20(7):1058-68

Abstracts and/or paper read at meetings

- 1- “Are There Different Spinopelvic Characteristics Between Patients With Primary Hip Osteoarthritis And Asymptomatic Controls? - Defining ‘Normal’ Spinopelvic Movements”**
 - Moritz Innmann, Christian Merle, Philippe Phan, Paul Beaulé, George Grammatopoulos
 - Podium presentation Moritz Innmann, 22nd EFORT Congress in Vienna, Austria from 30 June - 02 July 2021.
- 2- “A CSORN Study: Comparison Between Primary and Revision Lumbar Decompression Outcomes”**
 - Samantha Visva, Dr. Abdullah AlDuwaisan, Dita Moravek, Dr. Eugene Wai, Dr. Stephen Kingwell, Dr. Alexandra Stratton, Dr. Philippe Phan, and the CSORN Investigators
 - Poster presentation by Samantha Visva at 2021 Canadian Spine Society Annual virtual meeting (Vancouver, BC, Canada): 1st place -
- 3- “Comparative analysis between MRI and DTI and their clinical correlative abilities in traumatic cervical spinal cord injury: a systematic review and meta-analysis”**
 - Hamid S. Nessek, Kaelan Gobeil Odai, Eugene Wai MD MSc FRCSC, Maryam Tavakol Elahi, Eve Tsai MD PhD CIP FRCSC, Philippe Phan MD PhD FRCSC

- Podium presentation by Hamid S. Nessek at 2020 Canadian Spine Society Annual meeting (Whistler, BC, Canada)
- 4- **“The effect of preoperative opioid use on hospital length of stay in patients undergoing elective spine surgery”**
 - Alexandra Stratton, Philippe Phan, Eugene Wai, Stephen Kingwell, Dita Moravek, Sarah Tierney
 - Podium presentation by Alexandra Stratton at 2020 Canadian Spine Society Annual meeting (Whistler, BC, Canada)
- 5- **“Postoperative complication prediction between spinal surgeons and a machine learning model: a comparative study”**
 - Stephen Kingwell, Szymon Wilk, Eugene Wai, Philippe Phan, Alexandra Stratton, Safraz Mohammed, Eve Tsai, Fahad Alkerayf, Wojtek Michalowski
 - Podium presentation by Stephen Kingwell at 2020 Canadian Spine Society Annual meeting (Whistler, BC, Canada)
- 6- **“Is Using a Simplified Procedural Classification as Accurate as Using Current Procedural Terminology Codes to Predict Future Complications in Spinal Surgery?”**
 - Jérémie Thibault, Kim Phan, Dr. Eugene Wai, Mohamad Hoda, Dr. Philippe Phan
 - Poster presentation by Jérémie Thibault at 2020 Canadian Spine Society Annual meeting (Whistler, BC, Canada)
- 7- **“Are There Gender Based Differences in Outcomes for Elective Lumbar Spine Surgery in Canada”**
 - H. Ahn, A. Davtyan, C. Bailey, S. Christie, E. Wai, M. Weber, K. Thomas, A. Yee, N. Dea, C. Fisher, A. Soroceanu, J. Paquet, P. Phan, R. Rampersaud, P. Jarzem, D. Cushnie
 - Podium presentation by R. Rampersaud at 2019 Canadian Spine Society Annual meeting (Toronto, ON, Canada)
- 8- **“Impact of Resident Involvement on Cervical and Lumbar Spine Surgery Outcomes”**
 - K. Vu, P. Phan, A. Stratton, S. Kingwell, M. Hoda, E. Wai
 - Podium presentation by K. Vu at 2019 Canadian Spine Society Annual meeting (Toronto, ON, Canada)
 - Podium presentation by M. Hoda at 2019 HK Uthoff Orthopaedics research day (Ottawa, On, Canada)
- 9- **“Small Area Variation in Compliance with Clinical Practice Guidelines in the Management of Acute Low Back Pain”**
 - P. Gauthier, N. Le, A. Stratton, P. Phan, S. Kingwell, E. K. Wai
 - Podium presentation by E. Wai at 2019 Canadian Spine Society Annual meeting (Toronto, ON, Canada)
- 10- **“Understanding Surgeon Decision Making and Current Surgical Practice Regarding the DSIC Scheme and DLS Treatment: A CSORN Study”**
 - A. Maher, M. Hoda, A. Stratton, S. Kingwell, E. Wai, P. Phan
 - Podium presentation by A. Maher at 2019 Canadian Spine Society Annual meeting (Toronto, ON, Canada)
- 11- **“Higher Adverse Events and Longer Lengths of Stay for Posterior Compared to Anterior Cervical Spinal Surgery. Findings from a Multivariate Adjusted Analysis of a Multicentre North American Prospective Database”**
 - M. AlSawat, S. De Vere, A. Stratton, P. Phan, S. Kingwell, E. K. Wai
 - Podium presentation by M. AlSawat at 2019 Canadian Spine Society Annual meeting (Toronto, ON, Canada)
- 12- **“Hypoalbuminemia in Elective Lumbar Spine Surgery as a Risk Factor for Increased Complications and Length of Stay: An Analysis of the National Surgical Quality Improvement Program (NSQIP) Database”**
 - S. de Vere, E. Wai, D. Moravek, P. Phan, A. Stratton, S. Kingwell
 - Podium presentation by S. de Vere at 2019 Canadian Spine Society Annual meeting (Toronto, ON, Canada)
- 13- **“Personalized Risk Prediction in Spinal Surgery”**
 - S. Kingwell, E. Parimbelli, P. Phan, A. Stratton, E. Wai, W. Michalowski
 - Podium presentation by S. Kingwell at 2019 Canadian Spine Society Annual meeting (Toronto, ON, Canada)
- 14- **“The Effect of Peri-Operative Dexmedetomidine on Analgesic Outcomes in Adult Patients Undergoing Elective Spine Surgery: A Systematic Review and Meta-Analysis of Randomized Controlled Trials”**
 - A. Stratton, F. Abdallah, E. Wai, P. Phan, S. Kingwell, D. Moravek
 - Podium presentation by A.Stratton at 2019 Canadian Spine Society Annual meeting (Toronto, ON, Canada)
- 15- **“Predicting the DSIC Scheme Grade using Machine Learning: A CSORN Study”**
 - A. Maher, M. Hoda, A. Stratton, E. Wai, S. Kingwell, P. Phan
 - Poster presentation by A. Maher at 2019 Canadian Spine Society Annual meeting (Toronto, ON, Canada)
 - Podium presentation by A. Maher at 2019 Canadian Orthopaedic Association Annual meeting (Montreal, Qc, Canada)
- 16- **“Comparing the Prognostic Performance of Area under the Curve and F1-Score using a National Surgery Database”**

- Z. DeVries, M. Hoda, S. Kingwell, A. Stratton, E. Wai, P. Phan
 - Poster presentation by Z. DeVries at 2019 Canadian Spine Society Annual meeting (Toronto, ON, Canada)
 - Poster presentation by Z. DeVries at 2019 2019 Canadian Orthopaedic Association Annual meeting (Montreal, Qc, Canada)
- 17- **“Development of an Unsupervised Machine Learning Algorithm for the Prognostication of Walking Ability in Spinal Cord Injury Patients”**
- Z. DeVries, M. Hoda, S. Kingwell, A. Stratton, E. Wai, C. Rivers, V. Noonan, T. Plashkes, J. Paquet, N. Fallah, P. Phan
 - Poster presentation by Z. DeVries at 2019 Canadian Spine Society Annual meeting (Toronto, ON, Canada)
 - Poster presentation by Z. DeVries at 2019 2019 Canadian Orthopaedic Association Annual meeting (Montreal, Qc, Canada)
- 18- **“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”**
- Coyle MJ, Roffey DM, Phan P, Kingwell SP, Wai EK.
 - Podium presentation by Coyle MJ at 2018 HK Uthoff Orthopaedics research day (Ottawa, On, Canada)
- 19- **“Increased Risk of Infections Following Blood Transfusions in Anterior Cervical Spine Surgery”**
- H. Jabri, S. Kingwell, M. Bedaiwy, M. Al-Sawat, A. Al- Rabie, Y. AlQathani, S. Surur, P. Phan, E. Wai
 - Podium presentation by H. Jabri at 2018 Canadian Orthopaedics Association Annual meeting (Victoria, BC, Canada)
- 20- **“Allogeneic blood transfusions and infection risk in single level lumbar posterior decompression: an American College of Surgeons National Surgical Quality Improvement Program study. ”**
- A. Falsetto, D. Roffey, M. Hoda, S. Kingwell, P. Phan, A. Stratton, E. Wai
 - Podium presentation by A. Falsetto at 2018 HK Uthoff Orthopaedics research day (Ottawa, On, Canada)
 - Podium presentation by A. Falsetto at 2018 Canadian Spine Society Annual meeting (Banff, AB, Canada)
 - Podium presentation by A. Falsetto at 2018 Canadian Orthopaedics Association Annual meeting (Victoria, BC, Canada)
- 21- **“Beneficial effects of regular exercise prior to thoracolumbar spinal surgery”**
- K. Vu, G. McIntosh, D. Roffey, Eve Tsai, A. Stratton, P. Phan, S. Kingwell, M. Johnson, E. Wai
 - Podium presentation by K. Vu at 2018 Canadian Spine Society Annual meeting (Banff, AB, Canada)
 - Podium presentation by K. Vu at 2018 Canadian Orthopaedics Association Annual meeting (Victoria, BC, Canada)
- 22- **“Residents’ and fellows’ participation and postoperative technical surgical outcomes in elective anterior cervical spine surgery”**
- M. Bedaiwy, P. Phan, S. Kingwell, Y. Alqahtani, M. Alswat, A. AlRabie, E. Wai
 - Podium presentation by M. Bedaiwat 2018 Canadian Spine Society Annual meeting (Banff, AB, Canada)
 - Podium presentation by M. Bedaiwat 2018 Canadian Orthopaedics Association Annual meeting (Victoria, BC, Canada)
- 23- **“Increased prevalence of chronic disease in back pain patients living in a car-dependent neighbourhood”**
- A. Zeglinski-Spinney, D. Roffey, S. Kingwell, P. Phan, D. Wai. E. Wai
 - Podium presentation by D. Roffey 2018 Canadian Spine Society Annual meeting (Banff, AB, Canada)
- 24- **“Narcotic use trends in elective thoracolumbar spinal surgery patients”**
- A. Stratton, G. McIntosh, P. Phan, S. Kingwell, D. Roffey, E. Wai
 - Podium presentation by A. Stratton 2018 Canadian Spine Society Annual meeting (Banff, AB, Canada)
 - Podium presentation by M. El Koussy 2018 Canadian Orthopaedics Association Annual meeting (Victoria, BC, Canada)
- 25- **“Comparing the effect of arthroplasty versus fusion surgery on overall health status in patients with degenerative disc disease”**
- K. Vu, S. Kingwell, P. Phan, A. Stratton, D. Roffey, M. Hoda, P. Jarzem, J., E. Wai
 - Poster presentation by K. Vu 2018 Canadian Spine Society Annual meeting (Banff, AB, Canada)
- 26- **“Arthroplasty vs. fusion surgery folloing anterior decompression - The Canadian experience ”**
- K. Vu, S. Kingwell, P. Phan, A. Stratton, D. Roffey, M. Hoda, P. Jarzem, J., E. Wai
 - Poster presentation by K. Vu 2018 Canadian Spine Society Annual meeting (Banff, AB, Canada)

- 27-“ **Comparing the Accuracy of Logistic Regression and Artificial Intelligence Models to Predict Ambulatory Outcomes After Traumatic Spinal Cord Injury in AIS B and C: A Prospective Study from a Canadian Multi-centre Spinal Cord Injury Registry.**”
- **Phan P**, Budhram B, Zhang Q, Rivers C, Noonan VK, Plashkes T, Wai EK, Paquet J, Roffey DM, Stratton A, Tsai E, Fallah N; RHSCIR Network.
 - Podium presentation by Phan, P at 2018 Canadian Spine Society Annual meeting (Banff, AB, Canada)
 - Podium presentation by Budhram B at 2018 Canadian Orthopaedics Association Annual meeting (Victoria, BC, Canada)
 - Podium presentation by Stratton A at 2018 North American Spine Society (Los Angeles, California, USA)
- 28- **“A simplified clinical prediction rule for prognosticating independent walking after spinal cord injury: a prospective study from a Canadian multicenter spinal cord injury registry?”**
- Hicks KE, Zhao Y, Fallah N, Rivers C, Noonan V, Plashkes T, Wai EK, Roffey DM, Tsai E, Paquet J, Attabib N, Marion T, Ahn H, **Phan P**; RHSCIR Network.
 - Podium presentation by Hicks KE at the 2017 Canadian Spine Society Annual Meeting (Montreal, Qc, Canada)
 - Podium presentation by Hicks KE at the 2017 Canadian Orthopaedics Association Annual Meeting (Ottawa, On, Canada)
- 29-**“Evaluating the Extent of Clinical Variability Among Treatment Options for Patients With Adult Spinal Deformity.”**
- **Phan P**, Ploumis A, Hess K, Wood KB
 - Podium presentation by Phan, P at the American Association of Orthopaedics Surgeons Annual Meeting 2014 (New Orleans, LO, USA)
 - Poster presentation by Phan, P at the Canadian Spine Society Annual Meeting 2014 (Lake Louise, AB, Canada)
 - Podium presentation by Phan, P at the Canadian Orthopaedics Association June 2014 (Montreal, QC, Canada)
- 30-**“A double-blinded randomized controlled trial of incise-drapes in spine surgery: A feasibility study”**
- Vu (Brian) Le, Darren Roffey, Paul Macpherson, Marc Desjardins, Stephen P. Kingwell, **Philippe Phan**, Eugene K. Wai.
 - Poster presentation by P.Phan at the Canadian Spine Society meeting 2015 (Halifax, NS, Canada)
- 31-**“A rule-based algorithm can output valid surgical strategies in the treatment of AIS”**
- **P. Phan**, N. Mezghani, J.A. de Guise, H. Labelle
 - Podium presentation by P. Phan at the Canadian Spine Society Annual Meeting 2011 (Quebec city, Qc, Canada)
- 32-**“Tumour-Induced Osteomalacia of the Cervical Spine: A Rare but Important Cause of Hypophosphatemia.”**
- Bertha Wong ; **Philippe Phan**; Marlise Santos; Dora Liu.
 - Poster presentation by B. Wong at Endo 2016, Boston, Massachusetts, USA