

James H. MacDonald, M.D.

Orthopaedic Surgeon specializing in Hip and Knee Replacement

2000 Medical Parkway, Suite 101, Annapolis, MD 21401

Office: (410) 268-8862

Education

Hospital for Special Surgery
New York, New York
Fellow, Adult Reconstruction

Temple University Hospital
Philadelphia, Pennsylvania
Surgery Internship and Orthopaedic Residency

Georgetown University School of Medicine
Washington, District of Columbia

College of the Holy Cross
Worcester, Massachusetts
BA Biology

Practice

The Orthopaedic & Sports Medicine Center
Luminis Orthopaedics
Annapolis, MD 21401
Over 500 joint replacements per year

Hospital Appointment

Anne Arundel Medical Center
Luminis Health
2001 Medical Parkway
Annapolis, MD 21401

Licensing

Active Maryland State Medical and Federal DEA licenses

Memberships

American Academy of Orthopaedic Surgeons
American Association of Hip and Knee Surgeons

Research

Publications:

Comparison of Postoperative Outcomes of Patients Undergoing Total Hip and Total Knee Arthroplasty Following a Diagnosis of Dementia: a TriNetX Database Study. Turcotte, MacDonald et al, *Arthroplasty Today*, 2024

Social vulnerability adversely affects emergency-department utilization but not patient-reported outcomes after total joint arthroplasty. Baxter SN, Johnson AH, Brennan JC, MacDonald JH, Turcotte JJ, King PJ. *Arch Orthop Trauma Surg*, 2024

Outpatient physical therapy bundled payment models are feasible for total hip arthroplasty patients: an evaluation of utilization, cost and outcomes. Stock LA, Johnson AH, Brennan JC, Turcotte JJ, King PJ, MacDonald JH. *Arthroplasty* 5(1): 26, 2023

Trends in the reasons for revision total knee arthroplasty. Elliott Holbert S, Brennan J, Cattaneo S, King P, Turcotte J, MacDonald J. *Journal of Orthopaedics, Trauma and Rehabilitation*, 2023

The effects of hypoalbuminemia in obese patients undergoing total joint arthroplasty. Holbert SE, Brennan JC, Johnson AH, Turcotte JJ, King PJ, MacDonald JH. *Arch Orthop Trauma Surg*, 2023

Adductor Canal Blocks Are Not Associated With Improved Early Postoperative Outcomes in Patients Undergoing Total Knee Arthroplasty. Holbert SE, Baxter SN, Brennan JC, Johnson AH, Cheema M, Turcotte JJ, MacDonald JH, King PJ, Ochsner March, 2023, 23 (1) 9-15.

Racial Disparities in Outcomes of Total Joint Arthroplasty at a Single Institution: Have We Made Progress? Holbert SE, Brennan JC, Johnson AH, MacDonald JH, Turcotte JJ, King PJ. *Arthroplasty today* 19: 101059, 2023

Outcomes of Patients Undergoing Total Knee Arthroplasty with Spinal Anesthesia: A Comparison of Mepivacaine versus Bupivacaine. Holbert SE, Brennan J, Bahethi S, Mandich M, Cheema M, Turcotte JJ, MacDonald J, King P. *Journal of Arthroscopy and Joint Surgery* 9(3): 114, 2022

Postoperative outcomes of mepivacaine vs. bupivacaine in patients undergoing total joint arthroplasty with spinal anesthesia. Stock LA, Dennis K, MacDonald JH, Goins AJ, Turcotte JJ, King PJ. *Arthroplasty* 4(1): 32, 2022

Patients From Medically Underserved Areas Are at Increased Risk for Nonhome Discharge and Emergency Department Return After Total Joint Arthroplasty. Holbert SE, Cheema M, Brennan JC, MacDonald JH, King PJ, Turcotte JJ. *The Journal of Arthroplasty* 37(4): 609, 2022

The role of the lower extremity functional scale in predicting surgical outcomes for total joint arthroplasty patients. Turcotte JJ, Kelly ME, Fenn AB, Grover JJ, Wu CA, MacDonald JH. *Arthroplasty* 4(1): 3, 2022

Postoperative outcomes of total knee arthroplasty across varying levels of multimodal pain management protocol adherence. Harrison AE, Kozarek JDB, Yeh J, MacDonald JH, Ruiz-Pelaez JG, Barengo NC, Turcotte JJ, King PJ. *Journal of Orthopaedics*, 2021

Effect of a PA-led arthritis center on hip and knee osteoarthritis care. Kelly M, Aja J, Turcotte J, MacDonald J. *Journal of the American Academy of Physician Assistants*, 2021

Preoperative Education for Total Joint Arthroplasty: Does Reimbursement Reduction Threaten Improved Outcomes? Kelmer GC, Turcotte JJ, Dolle S, Angeles J, MacDonald JH, King PJ. *The Journal of Arthroplasty*, 2021

A Rapid Recovery Protocol Applied to Total Joint Arthroplasty Reduced Readmissions for Surgical but Not Medical Reasons Over a 5-Year Period. Turcotte JJ, Menon N, Angeles J, Zaidi A, King PJ, MacDonald JH. *HSS Journal*, 2021

Impact of Dexamethasone on Length of Stay and Early Pain Control in Direct Anterior Approach Total Hip Arthroplasty with Neuraxial Anesthesia. Kelly ME, Turcotte JJ, Aja JM, MacDonald JH, King PJ. *The Journal of Arthroplasty* 36(3): 1009-12, 2021

General vs Neuraxial Anesthesia in Direct Anterior Approach Total Hip Arthroplasty: Effect on Length of Stay and Early Pain Control. Kelly ME, Turcotte JJ, Aja JM, MacDonald JH, King PJ. *Journal of Arthroplasty* 36(3): 1013-17, 2021

Risk factors for progression to total knee arthroplasty within two years of presentation for knee osteoarthritis. Turcotte JJ, Kelly ME, Aja JM, King PJ, MacDonald JH. *Journal of Clinical Orthopaedics and Trauma* 16: 257-63, 2021

Impact of Intrathecal Fentanyl on Hospital Outcomes for Patients Undergoing Primary Total Hip Arthroplasty with Neuraxial Anesthesia. Kelly M, Turcotte J, Aja J, MacDonald J, King P. *Arthroplasty today* 8: 200-03, 2021

Complication rates and resource utilization after total hip and knee arthroplasty stratified by body mass index. Turcotte J, Kelly M, Aja J, King P, MacDonald J. *Journal of Orthopaedics* 24: 111-20, 2021

Preoperative Predictors of Same-Day Discharge after Total Knee Arthroplasty. Turcotte JJ, Menon N, Kelly ME, Grover JJ, King PJ, MacDonald JH. *Arthroplasty today* 7: 182-87, 2021

Risk factors for severe illness in hospitalized Covid-19 patients at a regional hospital. Turcotte JJ, Meisenberg BR, MacDonald JH, Menon N, Fowler MB, West M, Rhule J, Qureshi SS, MacDonald EB. *PLoS One* 15(8): e0237558, 2020

Preoperative Predictors of Patients Requiring Inpatient Admission for Total Hip Arthroplasty Following Removal from the Medicare Inpatient-Only List. Turcotte JJ, Menon N, Aja JM, Grover JJ, King PJ, MacDonald JH. *J Arthroplasty*. 2020

Outpatient, Home-Based Physical Therapy Promotes Decreased Length of Stay and Post-Acute Resource Utilization After Total Joint Arthroplasty Menon N, Turcotte JJ, Stone AH, Adkins AL, MacDonald JH, King PJ. *J Arthroplasty*. 2020

A dynamic knee extension device improves flexion contracture before total knee arthroplasty: a randomized controlled trial. Stone AH, Turcotte JJ, Fowler MB, MacDonald JH, Brassard MF, King PJ. *Curr Orthop Pract*. 31(4): 347-51, 2020

Impact of Preoperative Intra-articular Injection on Infection Rates Following Total Knee Arthroplasty: An Analysis of Over 19,000 Patients. Turcotte JJ, Aja JM, Menon N, MacDonald J, King PJ. *Journal of Orthopaedics and Sports Medicine* 2:140-49, 2020 27. PMID: 30829986

Opioid Use Patterns after Total Joint Arthroplasty. King P, Stone A, Arentz E, MacDonald J. *J Surg Orthop Adv*. 2020. Spring; 29(1):13-17. PMID: 32223860

Insulin-Dependent Diabetes is an Independent Risk Factor for Complications after Total Joint Replacements. Sibia US, Weltz AS, MacDonald JH, King PJ. *J Surg Orthop Adv*. Winter 2018; 27(4):294-298. PMID: 30777829

Differences in Perioperative Outcomes and Complications between African American and White Patients after Total Joint Arthroplasty. Stone AH, MacDonald JH, Joshi MS, King PJ. *J Arthroplasty*. 2019 Apr; 34(4):656-662. PMID: 30674420.

Reducing Length of Stay Does Not Increase Emergency Room Visits or Readmissions in Patients Undergoing Primary Hip and Knee Arthroplasties. Stone AH, Dunn L, MacDonald JH, King PJ. *J Arthroplasty*. 2018 Aug; 33(8):2381-2386. PMID: 29656979

Opioid Prescriptions after Total Joint Arthroplasty. Sibia US, Mandelblatt AE, Caleb Alexander G, King PJ, MacDonald JH. *J Surg Orthop Adv*. Fall 2018; 27(3):231-236. PMID: 30489249

The Impact of Patient-Reported Penicillin Allergy on Risk for Surgical Site Infection in Total Joint Arthroplasty. Stone AH, Kelmer G, MacDonald JH, Clance MR, King PJ. *Journal of the American Academy of Orthopedic Surgeons*. 2019 Feb 27. PMID: 30829986

The Effect of Psychiatric Diagnosis and Psychotropic Medication on Outcomes Following Total Hip and Total Knee Arthroplasty. Stone AH, MacDonald JH, King PJ. *J Arthroplasty*. 2019; 34(9):1918-1921.

Functional Outcomes and Accuracy of Patient-Specific Instruments for Total Knee Arthroplasty. Stone AH, Sibia US, MacDonald JH. *Surg Innov*. 2018 Oct; 25(5):470-475. PMID: 30024349.

The Cost of Unnecessary Hospital Days for Medicare Total Joint Replacement Patients Discharging to Skilled Nursing Facilities. Sibia US, Turcotte JJ, MacDonald JH, King PJ, *J Arthroplasty*, 2017. PMID: 28455180

The Impact of Surgical Technique on Patient Reported Outcome Measures and Early Complications after Total Hip Arthroplasty. Sibia US, Turner TR, MacDonald JH, King PJ, J Arthroplasty, 2016. PMID: 27876253

Incidence, Risk Factors, and Costs for Hospital Returns after Total Joint Replacements. Sibia US, Mandelblatt AE, Callanan MA, MacDonald JH, King PJ, J Arthroplasty, 2016. PMID: 27597429

Who Is Not a Candidate for a 1-Day Hospital-Based Total Knee Arthroplasty? Sibia US, King PJ, MacDonald JH, J Arthroplasty, 2016. PMID: 27491443

Do Shorter Lengths of Stay Increase Readmissions after Total Joint Replacements? Sibia US, Waite KA, Callanan MA, Park AE, King PJ, MacDonald JH, Arthroplasty Today, 2016. PMID: 28378007

Potential Fire Hazard of Bone Cement in the Operating Room: A Case Study. Sibia US, Connors K, Dyckman S, Zahiri HR, George I, Park AE, MacDonald JH, The American Journal of Orthopaedics, 2016. PMID: 28005104

Predictors of Hospital Length of Stay in an Enhanced Recovery after Surgery Program for Primary Total Hip Arthroplasty. Sibia US, MacDonald JH, King PJ, J Arthroplasty, 2016. PMID: 27067175

Knee Arthrodesis: Indications and Review of Current Techniques. MacDonald JH, Lorei MP, Johanson NA, Freiberg AA, Journal of the American Academy of Orthopaedic Surgeons. 2006. PMID: 16520366

Primary Constrained Condylar Knee Arthroplasty Without Stems for the Valgus Knee. Anderson JA, Baldini A, MacDonald JH, Pellicci PM, Sculco TP, Clinical Orthopaedics and Related Research, 2006. PMID: 1639476

Podium Presentations:

Acetabular Revisions without Bone Graft. Pennsylvania Orthopaedic Society, Philadelphia, PA, 2000.

Complications of Spinal Fusion for Thoracic Adolescent Idiopathic Scoliosis. AAOS, 2002.

Knee Arthrodesis: Indications and Review of Current Techniques. Pennsylvania Ortho Society, 2003.

Enhanced Perioperative Medical Management for Total Joint Arthroplasty. Florence, Italy, May, 2014.

Patient specific Instrumentation for TKR. Emerging Concepts in Ortho. Surgery, Annapolis, MD, 2014.

The Perfect TKR. Cadaveric Demonstration, Emerging Concepts in Ortho. Surgery, Annapolis, MD, 2015.

Panelist: Emerging Concepts in Orthopedic Surgery, Annapolis, MD, 2016, 2017.

Panelist: Maryland Orthopaedics Association Meeting, Annapolis, MD, 2018 THR Revisions

Patients From Medically Underserved Areas in Maryland Leads to Higher Emergency Department Return Rate and Higher Rate of Discharge to Skilled Nursing Facilities after Joint Replacement. Holbert S, Cheema M, Brennan J, MacDonald J, King P, Turcotte J. AAOS 2022 Annual Meeting. March 22-26, 2022; Chicago, IL.

The Impact of a Nurse Navigator Led Preoperative Course on Outcomes following Total Joint Arthroplasty. Kelly M, Dolle S, Menon N, Angeles J, Turcotte J, MacDonald, King P. AAOS 2021 Annual Meeting. August 31 –September 3, 2021; San Diego, CA.

A Dynamic Knee Extension Device Improves Flexion Contracture before Total Knee Arthroplasty: A Randomized Controlled Trial. Turcotte J, Stone A, Fowler B, MacDonald J, Brassard M, King P. Maryland Orthopaedic Association 2020 February 8, 2020; Annapolis, MD.

Impact of preoperative intra-articular injection on infection rates following total knee arthroplasty: An analysis of over 19,000 patients. Turcotte J, Kelly M, Menon N, Aja J, MacDonald J, King, P. Southern Orthopaedic Association 2020; July 22-25, 2020; White Sulphur Springs, WV (virtual).

A Dynamic Knee Extension Device Improves Flexion Contracture before Total Knee Arthroplasty: A Randomized Controlled Trial. Turcotte J, Stone A, Fowler, B, MacDonald, J, Brassard, M, King, P. Southern Orthopaedic Association 2020; July 22-25, 2020; White Sulphur Springs, WV (virtual).

Preoperative Predictors of Patients Requiring Inpatient Admission for Total Hip Arthroplasty Following Removal from the Medicare Inpatient Only List. Turcotte J, Menon N, Aja J, Grover J, King P, MacDonald J. Southern Orthopedic Association 2020; July 22-25, 2020; White Sulphur Springs, WV (virtual).

Opioid Use Patterns after Total Joint Arthroplasty. Stone AH, Arentz E, MacDonald JH, King PJ. Eastern Orthopedic Association 2018, October 19-21, 2018; Amelia Island, FL

Incidence, Risk Factors and Causes of Unplanned Interventions after Total Joint Arthroplasty. Stone AH, Grover J, MacDonald JH, King PJ. Maryland Orthopedic Association: February 2018

The Cost Implications of Unnecessary Inpatient Days for Medicare Total Joint Replacement Patients Discharging to Rehabilitation Sibia US, Turcotte JJ, MacDonald JH, King PJ. Maryland Orthopaedic Association; February 2017

The Cost of Unnecessary Hospital-based Days for Medicare Joint Arthroplasty Patients Discharging to Skilled Nursing Facilities Sibia US, Turcotte JJ, MacDonald JH, King PJ. ACS-NSQIP Annual Meeting; July 2017

Who is Not a Candidate for a One Day Hospital-based Total Knee Arthroplasty? Sibia US, King PJ, MacDonald JH. Eastern Orthopaedic Association Annual Meeting; October 2016

The impact of surgical technique on operative and quality of life measures after primary total hip arthroplasty. Sibia US, MacDonald JH, King PJ. Pennsylvania Orthopaedic Society; April 2016

Multidisciplinary enhanced recovery after surgery for total joint replacements: Readmission rates after updating ERAS to shorten length of hospital stay. Sibia US, Zahiri HR, Park AE, King PJ, MacDonald JH. American College of Surgeons Clinical Congress; October 2015

Poster Presentations:

Postoperative Outcomes of Patients Undergoing Total Hip Arthroplasty with Dementia: A TriNetX Database Study. Johnson AH, Brennan JC, King PJ, Turcotte JJ, MacDonald JH. AAHKS, November 7-10, 2023; Dallas, TX.

The effects of hypoalbuminemia in obese patients undergoing total joint arthroplasty. Holbert, SE, Brennan JC, Johnson AH, Turcotte JJ, King PJ, MacDonald JH. 2023 ACS Quality & Safety Meeting. July, 2023; Minneapolis, MN.

Outpatient physical therapy bundled payment models are feasible for total hip arthroplasty patients: an evaluation of utilization, cost and outcomes. Stock LA, Johnson AH, Brennan JC, Turcotte JJ, King PJ, MacDonald JH. 2023 ACS Quality & Safety Meeting. July, 2023; Minneapolis, MN.

The effects of hypoalbuminemia in obese patients undergoing total joint arthroplasty. Holbert, SE, Brennan JC, Johnson AH, Turcotte JJ, King PJ, MacDonald JH. AAOS meeting March 7-10, 2023; Las Vegas, NV.

Racial Disparities in Outcomes of Total Joint Arthroplasty. Holbert S, Brennan J, Johnson A, Stock L, Baxter S, MacDonald J, Turcotte J, King P. Maryland Orthopaedic Association 2023 Annual Meeting. February 11, 2023; Hanover, MD.

Postoperative Outcomes of Mepivacaine versus Bupivacaine in Patients Undergoing Total Joint Arthroplasty with Spinal Anesthesia. Stock L, Dennis K, MacDonald J, Goins A, Turcotte J, King P. ACS Quality and Safety Conference 2022. July 15-18, 2022; Chicago, IL

Patients from Medically Underserved Areas are at Increased Risk for Non-Home Discharge and Emergency Department Return after Total Joint Arthroplasty. Holbert S, Cheema M, Brennan J, Baxter S, MacDonald J, King P, Turcotte J. 2022 Movement is Life Caucus. November 10-11, 2022; Washington, D.C.

The Use of Adductor Canal Blocks in Patients Undergoing TKA. Holbert S, Brennan J, Cheema M, Turcotte J, MacDonald J, King P. Poster Presentation: Maryland Orthopaedic Association Annual Meeting 2022. March 19, 2022; Annapolis, MD.

Outcomes of Patients Undergoing TKA with Spinal Anesthesia. Holbert S, Brennan J, Bahethi S, Turcotte J, MacDonald J, King P. Poster Presentation: Maryland Orthopaedic Association Annual Meeting 2022. March 19, 2022; Annapolis, MD.

Complication Rates and Resource Utilization after Total Hip and Knee Arthroplasty Stratified by Body Mass Index. Turcotte J, Kelly M, Aja J, King P, MacDonald J. ACS Quality and Safety Conference 2021. July 12-16, 2021; (virtual)

The Impact of a Nurse Navigator Led Preoperative Course on Outcomes Following Total Joint Arthroplasty. Kelly M, Dolle S, Menon N, Angeles J, Turcotte J, MacDonald J, King P. ACS Quality and Safety Conference 2021. July 12-16, 2021; (virtual)

The Impact of Targeted Nurse Navigator Intervention on Outcomes in High-risk Patients Undergoing Total Joint Arthroplasty: A Pilot Study. Turcotte J, Kelly M, Dolle S, Aja J, MacDonald J, King P. ACS Quality and Safety Conference 2021. July 12-16, 2021; (virtual)

Early Outcomes of a Novel Bicruciate Retaining Knee System: A 2-Year Minimum Retrospective Cohort Study. MacDonald J, et al. British Orthopaedic Association Annual Congress 2021. September 21-24, 2021; Aberdeen, United Kingdom.

The Impact of Targeted Nurse Navigator Intervention on Outcomes in High-Risk Patients Undergoing Total Joint Arthroplasty: A Pilot Study. Turcotte J, Kelly M, Dolle S, Aja J, MacDonald J, King P. AAOS 2021 August 31-September 3, 2021; San Diego, CA.

Impact of preoperative intra-articular injection on infection rates following total knee arthroplasty: An analysis of over 19,000 patients. Turcotte J, Menon N, Aja J, King P, MacDonald J. Maryland Orthopaedic Association 2020. February 8, 2020; Annapolis, MD.

Assessing The Early Clinical Performance Of A Bi-Cruciate Retaining Total Knee Implant: A Prospective Multicenter Study Of 174 Primary Total Knee Arthroplasties. Huang B, MacDonald J, Schwarzkopf R, Gerlinger T, Swank M, Kamali A, Schinsky M, Ast M. Virtual EFORT Congress (VEC), 28 October - 30 October 2020.

A Pilot Physical Therapy Program Increases Discharge Home and May Reduce Cost after Total Joint Arthroplasty. Stone, A., Adkins, A., Turcotte, J., MacDonald, J., King, P. APTA 2019 Combined Sections Meeting; Jan. 23-26, 2019; Washington, D.C.

Differences in Perioperative Outcomes and Complications Between African American and White Patients after Total Joint Arthroplasty. Stone A, Turcotte J, MacDonald J, King P. Poster presented at: 2019 Movement is Life Caucus; November 14-15, 2019, Washington D.C.

Racial Disparities in Perioperative Outcomes Following Total Joint Arthroplasty. Stone AH, MacDonald JH, King PJ. AAHKS, November 1-4, 2018: Dallas, TX

Racial Disparities in Perioperative Outcomes during Total Knee Arthroplasty: An ACS-NSQIP Analysis. Stone AH, Tani S, MacDonald JH, King PJ. ACS Quality and Safety Conference July 20-22, 2018: Orlando, FL

Growing Trend towards Total Hip Arthroplasty for the Treatment of Femoral Neck Fractures: An ACS-NSQIP Analysis Stone AH, Sibia US, MacDonald JH, King PJ. American College of Surgeons Quality and Safety Conference July 20-22, 2018: Orlando, FL

Opioid Use Patterns One Year after Total Joint Replacement. Stone AH, Arentz E, MacDonald JH, King PJ. Maryland Orthopedic Association (February 2018)

Predictors of hospital length of stay in an enhanced recovery after surgery program for primary total hip arthroplasty. Sibia US, Waite KA, MacDonald JH, King PJ. Pennsylvania Orthopaedic Society, April 2016.

Patent:

“A Customized Process for Facilitating Successful Total Knee Replacement with Outcome Analysis”, United Kingdom (GB2505067).

Funding/Clinical Trials:

- 1) A Prospective, Non-randomized, Single Cohort, Multicenter Study to Evaluate the Clinical Outcome of Total Knee Arthroplasty Using the Journey II CR Total Knee System
- 2) Comparison of operative outcomes and quality of life after total knee replacement surgery: Patient specific vs. standard instrumentation
- 3) A Prospective, Multicenter, Post-Market Clinical Follow-Up Study to Evaluate the Safety and Effectiveness of the Journey II XR Total Knee System
- 4) Post-Approval Study of the R3 Biologics delta Ceramic Acetabular System – United States
- 5) Short, Medium and Long Term Survivorship of Attune™ Primary Total Knee Prostheses
- 6) A Prospective randomized trial to examine the effectiveness of KneeMD flexion contracture in total knee arthroplasty patients
- 7) How are prescription opioids used by adult patients following discharge from the hospital? Multicenter trial with Johns Hopkins University.
- 8) Multiple donations for the orthopaedic practice and research from one patient.

Other

Editorial Board: The Journal of Arthroplasty.

Media appearance 2015: NBC TV news, Washington DC: Interviewed for highest volume/lowest complication rate in mid-atlantic region for total knee replacement (CMS data compiled by ProPublica for their "Surgeon Scorecard").

Surgeon Lead/Developer: AAMC Outpatient Arthritis Center. PA-staffed hip and knee center to decrease wait times and provide subspecialized care. Includes a data-collection platform with standardized notes.

Top Doc Annapolis: 2009-2023. Local doctors surveyed for a magazine.

Introduced ACL retaining TKR to AAMC, 2018.

OSMC Executive Committee, 2015-2018.

AAMC Leadership Academy, 2012-2013.

Surgeon lead, TeamSTEPPS for patient safety, 2012.

Introduced image-based custom cutting jigs to AAMC for TKR, 2011.

Clinical Operations Committee, OSMC, 2010-2015.

Coordinator, Arthritis CME Conference for hip/knee surgeons, 2006-present.

Resident meeting/cadaver lab: 2019, 2022, 2023

Host, Northeast Regional Meetings, Smith and Nephew, 2018, 2021