

James H. MacDonald, M.D.
Orthopaedic Surgeon specializing in Hip and Knee Replacement

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Main office: (410) 268-8862

Direct: (410) 267-5561

Education

Hospital for Special Surgery
535 East 70th Street
New York, NY 10021
Fellow in Adult Reconstruction, 2004

Temple University Hospital
Broad and Ontario Streets
Philadelphia, PA 19140
Surgery Internship and Orthopaedic Residency, 2003

Georgetown University School of Medicine
3900 Reservoir Road, NW
Washington, DC 20007
M.D., 1998

College of the Holy Cross
1 College Street
Worcester, MA 01610
BA Biology, 1989

Practice

8/2004 - present
The Orthopaedic & Sports Medicine Center
Annapolis, MD 21401
Over 500 joint replacements per year

Hospital Appointment

7/2004 – present
Anne Arundel Medical Center
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
Maryland Orthopaedic Association

Research

Manuscripts:

Submitted and Accepted Work:

Impact of a Physician Assistant Led Arthritis Center on Hip and Knee Osteoarthritis Care in a High-Volume Orthopedic Practice – accepted to Journal of the American Academy of Physician Assistants

Outcomes of Patients Undergoing Total Knee Arthroplasty with Spinal Anesthesia: A Comparison of Mepivacaine versus Bupivacaine – submitted to Arthroplasty Today

Do Adductor Canal Blocks Improve Early Outcomes for Patients Undergoing Total Knee Arthroplasty? – submitted to Journal of Arthroplasty

Postoperative Outcomes of Total Knee Arthroplasty across Varying Levels of Multimodal Pain Management Protocol Adherence – submitted to Journal of Orthopaedics

The Role of the Lower Extremity Functional Scale in Predicting Surgical Outcomes for Total Joint Arthroplasty Patients – submitted to Arthroplasty

Publications:

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 The 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

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

Turcotte JJ, Meisenberg BR, MacDonald JH, Menon N, Fowler MB, West M, Rhule J, Qureshi SS, MacDonald EB. Risk factors for severe illness in hospitalized Covid-19 patients at a regional hospital. *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

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

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

Turcotte JJ, Aja JM, Menon N, MacDonald J, King PJ. Impact of Preoperative Intra-articular Injection on Infection Rates Following Total Knee Arthroplasty: An Analysis of Over 19,000 Patients. *Journal of Orthopaedics and Sports Medicine* 2:140-49, 2020 27. doi: 10.5435/JAAOS-D-18-00709. PubMed 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, Wertz 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

Growing Trend toward Total Hip Arthroplasty for the Treatment of Femoral Neck Fractures: An ACS-NSQIP Analysis. Stone AH, Sibia US, MacDonald JH, King PJ, J Arthroplasty (submitted)

Hospital-Based Outpatient Total Hip Arthroplasty is Safe: An ACS-NSQIP Analysis. Sibia US, Weltz AS, King PJ, MacDonald JH. Journal of Surgical Orthopaedic Advances (submitted)

Research 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 Demo., Emerging Concepts in Ortho. Surgery, Annapolis, MD, 2015.

Panelist for open discussion:

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

Maryland Orthopaedics Association Meeting, Annapolis, MD, 2018 Femoral Revisions in THR

Podium Presentation/Poster Author

Multidisciplinary Enhanced Recovery after Surgery (ERAS) in Total Joint Replacement: Complication Rates after Improving ERAS to Shorten Length of Stay. American College of Surgeons, Chicago, IL, October 2015.

Enhanced Recovery after Surgery in Total Joint Replacement. Maryland Orthopaedic Association, Annapolis, MD, February, 2016.

The Impact of Surgical Technique on Operative and Quality of Life Measures after Primary Total Hip Arthroplasty. Pennsylvania Orthopaedic Society, Boca Raton, FL, April, 2016.

Predictors of Hospital Length of Stay in an Enhanced Recovery after Surgery Program for Total Hip Arthroplasty. Pennsylvania Orthopaedic Society, Boca Raton, FL, April, 2016. (poster)

Opioid Use and Pain Control after Total Joint Replacement. Emerging Concepts in Orthopaedic Surgery, Annapolis, MD, 2016.

Enhanced Recovery After Joint Replacement at AAMC. Emerging Concepts in Orthopaedic Surgery, Annapolis, MD, 2016.

Who is Not a Candidate for a One Day Hospital-based Total Knee Arthroplasty? Eastern Orthopaedic Association, New Orleans, LA, October, 2016.

The Cost Implications of Unnecessary Inpatient Days for Medicare Total Joint Replacement Patients Discharging to Rehabilitation Facilities. Maryland Orthopaedic Association, February, 2017.

Incidence, Risk Factors, and Causes of Unplanned Interventions after Total Joint Arthroplasty. Maryland Orthopaedic Association, February, 2018.

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 Academy of Orthopaedic Surgery, New Orleans, LA, 2018 (poster)

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

Racial Disparities in Perioperative Outcomes Following Total Joint Arthroplasty. Stone AH, Macdonald JH, King PJ. American Association of Hip and Knee Surgeons November 1-4, 2018: Dallas, TX (poster)

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

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; January 23-26, 2019; Washington, D.C. (poster)

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.

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. Poster Presented at: Maryland Orthopaedic Association 2020 Annual Meeting. February 8, 2020; Annapolis, MD.

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. Podium Presentation: Maryland Orthopaedic Association 2020 Annual Meeting. February 8, 2020; Annapolis, MD.

Interim Results of an Ongoing, Prospective, Multicenter Study of the Journey II Cruciate-Retaining Total Knee System. Villalba J, MacDonald J, Gerlinger T, Chow J, Swank M, Geller J, Cooper J, Torner P, Miles J, Kamali A. 21st EFORT Congress, Vienna, Austria June, 2020 (poster)

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.

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 Orthopaedic Association Annual Meeting 2020; July 22-25, 2020; White Sulphur Springs, WV (converted to virtual meeting due to COVID-19).

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. Virtual Presentation: Southern Orthopaedic Association Annual Meeting 2020; July 22-25, 2020; White Sulphur Springs, WV (converted to virtual meeting due to COVID-19).

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. Virtual Presentation: Southern Orthopaedic Association Annual Meeting 2020; July 22-25, 2020; White Sulfur Springs, WV (converted to virtual meeting due to COVID-19).

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 Poster Presentation: American Academy of Orthopaedic Surgeons 2021 Annual Meeting. August 31-September 3, 2021; San Diego, CA.

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 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. Podium Presentation: American Academy of Orthopaedic Surgeons 2021 Annual Meeting. August 31-September 3, 2021; San Diego, CA. 2.

Patent

“A Customized Process for Facilitating Successful Total Knee Replacement with Outcome Analysis”, United Kingdom (gov.uk, ipsum search, GB2505067). AITKR.net.

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 Biolog 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.

Other

Editorial Board: The Journal of Arthroplasty.

Media appearance 2015: NBC TV news, Washington DC: Interviewed for highest volume/lowest complication rate in region for total knee replacement (CMS data).

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: 2009-2021.

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.

University of Rochester, Laboratory Technician, Rochester, NY, 1993-1994.

Ogilvy & Mather Direct, Account Executive, New York, NY, 1989-1993.