Stanford



Mark Burbridge

Clinical Associate Professor, Anesthesiology, Perioperative and Pain Medicine

CLINICAL OFFICE (PRIMARY)

- **Anesthesia Department**

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Bio

BIO

I am an anesthesiologist who subspecializes in the perioperative care of patients undergoing complex neurosurgical procedures. I regularly publish clinical research and have presented this research at national and international meetings. I am also heavily involved in the education of medical students, residents, and fellows at Stanford.

CLINICAL FOCUS

- Anesthesia
- Neuroanesthesia

ACADEMIC APPOINTMENTS

- Clinical Associate Professor, Anesthesiology, Perioperative and Pain Medicine

ADMINISTRATIVE APPOINTMENTS

- Associate Neuroanesthesia Fellowship Director, Department of Anesthesia, (2026- present)
- Associate Division Chief, Multispecialty Division, Department of Anesthesia, (2026- present)
- Clinical Director, Section of Neuroanesthesia, Department of Anesthesia, (2024- present)
- Airway Management Physician, National Football League/San Francisco 49ers, (2021- present)

HONORS AND AWARDS

- Article of the Month (January), OpenAnesthesia (2021)
- Teaching Scholar Award, Department of Anesthesiology, Stanford University (2017)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Clinical Affairs Committee, Society for Neuroscience in Anesthesiology and Critical Care (2020 - present)
- Neuroanesthesiology Committee, American Society of Anesthesiologists (2023 - present)

PROFESSIONAL EDUCATION

- Fellowship: Stanford University School of Medicine (2015) CA
- Board Certification: Anesthesia, Royal College of Physicians and Surgeons (2013)
- Neuroanesthesia Fellowship, Stanford University (2015)
- Anesthesia Residency, University of Saskatchewan (2013)
- Medical Education, University College Dublin (2008)
- Undergraduate Degree, University of Toronto (2004)

Publications

PUBLICATIONS

- **Exploring the Landscape of Neuroanesthesia Quality Improvement Structure, Processes, and Outcomes: A Pilot Survey.** *Journal of neurosurgical anesthesiology*
  Lele, A. V., Jangra, K., Burbridge, M., Chakraborty, I., Dube, S. K., Esmail, T., Guo, S., Jacob, S., Mathews, L., McCullough, I., Sachdev, A., Shafiq, F., Sharma, et al
  2026

- **Ventriculostomy-Related Infections by Country-Income Level: A Systematic Review and Bayesian Hierarchical Meta-analysis.** *Journal of neurosurgical anesthesiology*
  Blacker, S. N., Prabhakar, H., Moreton, E. O., Burbridge, M., Dunn, L., Gouker, L. N., Heller, B. J., Jangra, K., Kang, M., Nadler, J. W., De Sloovere, V., Raquer, A., Shrestha, et al
  2026

- **Verifying Facts in Patient Care Documents Generated by Large Language Models Using Electronic Health Records.** *NEJM AI*
  Chung, P., Swaminathan, A., Goodell, A. J., Kim, Y., Momsen Reincke, S., Han, L., Deverett, B., Sadeghi, M. A., Ariss, A. B., Ghanem, M., Seong, D., Lee, A. A., Coombes, et al
  2026; 3 (1): AIdbp2500418

- **Anesthetic Considerations for Geriatric Neurosurgical Patients** *Geriatric Anesthesiology*
  Baker, H., Arriaga, M., Berger, M., Burbridge, M.
  2026

- **Effect of Bundled Care on External VentricularDrain Infections: A Systematic Review and Meta-analysis.** *Journal of neurosurgical anesthesiology*
  Blacker, S. N., Prabhakar, H., Moreton, E. O., Burbridge, M., Dunn, L., Gouker, L. N., Heller, B. J., Jangra, K., Kang, M., Nadler, J. W., De Sloovere, V., Raquer, A., Shrestha, et al
  2025

- **Perspectives on Analgesia for Craniotomy: A Survey of Anesthetic Practices.** *Journal of neurosurgical anesthesiology*
  Vincent, A., Burbridge, M. A., Chaikittisilpa, N., Chakraborty, I., Chong, M., Chowdhury, T., Garcia, P., Gaudet, J. G., Kiatchai, T., Prabhakar, H., Shiferaw, A. A., Shrestha, G. S., Tan, et al
  2025; 37 (3): 319-324

- **Update on scalp nerve block for craniotomy.** *Current opinion in anaesthesiology*
  Maria Bombardieri, A., Pochebyt, M., Burbridge, M. A.
  2025

- **Verifying Facts in Patient Care Documents Generated by Large Language Models Using Electronic Health Records** *NEJM AI*
  Chung, P., et al
  2025; 3 (1)

- **Intraoperative Anesthetic Care During Emergent/Urgent Craniotomy or Craniectomy for Intracranial Hypertension or Herniation: A Systematic Review.** *Journal of neurosurgical anesthesiology*
  Blacker, S. N., Burbridge, M., Chowdhury, T., Gouker, L. N., Heller, B. J., Kang, M., Moreton, E., Nadler, J. W., Sindelar, L. B., Vincent, A. N., Williams, J. H., Lele, A. V.
  2024

- **Incidence of Coexisting Diseases in Adult Moyamoya Vasculopathy Patients by Racial Group at a Large American Referral Center.** *Journal of neurosurgical anesthesiology*
  Wheaton, N., Harrison, N., Doufas, A., Chakraborty, D., Chang, A. L., Aghaeepour, N., Burbridge, M. A.
  2024
- **Regional anesthesia for head and neck neurosurgical procedures: a narrative review in adult and pediatric patients.** *International anesthesiology clinics*
  Pochebyt, M., Herron, S. M., Pan, S. J., Burbridge, M., Bombardieri, A. M.
  2024; 62 (1): 10-20
- **Intraoperative Seizure Under General Anesthesia Not Detected by EEG: A Case Report** *CUREUS JOURNAL OF MEDICAL SCIENCE*
  Kumar, S., Rodriguez, A. J., Burbridge, M. A.
  2023; 15 (7)
- **Peripherally inserted central catheters inserted by anesthesiologists: an analysis of 146 insertions for complications.** *Korean journal of anesthesiology*
  Burbridge, M. A., Jaffe, R. A.
  2023
- **Differences in Perioperative Management of Patients Undergoing Complex Spine Surgery: A Global Perspective.** *Journal of neurosurgical anesthesiology*
  Blacker, S. N., Woody, N., Abate Shiferaw, A., Burbridge, M., Bustillo, M. A., Hazard, S. W., Heller, B. J., Lamperti, M., Mejia-Mantilla, J., Nadler, J. W., Rath, G. P., Robba, C., Vincent, et al
  2023
- **A Global Review of the Perioperative Care of Patients With Aneurysmal Subarachnoid Hemorrhage Undergoing Microsurgical Repair of Ruptured Intracerebral Aneurysm.** *Journal of neurosurgical anesthesiology*
  Lele, A. V., Shiferaw, A. A., Theard, M. A., Vavilala, M. S., Tavares, C., Han, R., Assefa, D., Dagne Alemu, M., Mahajan, C., Tandon, M. S., Karmarkar, N. V., Singhal, V., Lamsal, et al
  2023
- **Lipedematous scalp renders surgical neuronavigation facial recognition registration impossible using conventional methods.** *Journal of clinical monitoring and computing*
  Dacanay, E., Burbridge, M. A.
  2023
- **Intraoperative Seizure Under General Anesthesia Not Detected by EEG: A Case Report** *Cureus*
  Kumar , S., Rodriguez, A. J., Burbridge , M. A.
  2023
- **Fosaprepitant Does Not Interfere With Commonly Used Intraoperative Neuromonitoring Modalities Under General Anesthesia: A Preliminary Study.** *Journal of neurosurgical anesthesiology*
  Lopez, J. R., Jaffe, R. A., Lopez, I. R., Burbridge, M. A.
  2022
- **Scalp blocks do not affect the accuracy of neuronavigation facial recognition registration** *Journal of Clinical Monitoring and Computing*
  Burbridge, M. A., Dacanay, E., Shields, G., Jaffe, R. A.
  2022
- **Tension Pneumocephalus.** *Journal of neurosurgical anesthesiology*
  Morris, R. S., Burbridge, M. A.
  2022
- **Intraoperative Anaphylaxis: Definition Determines Detection Response** *ANESTHESIA AND ANALGESIA*
  Burbridge, M. A.
  2021; 132 (5): E78
- **Rapid Blood Transfusion: The Importance of Hemodilution and Needleless Connectors.** *Cureus*
  Burbridge, M. A., Panigrahi, A. K., Stone, S. A., Jaffe, R. A., Brock-Utne, J.
  2021; 13 (3): e13999

- **Antiepileptic and Other Neurologically Active Drugs** *Stoelting's Pharmacology and Physiology in Anesthetic Practice*
  Burbridge, M. A., Flood, P. D.
  Wolters Kluer.2021; 6
- **Enhancing Perioperative Care of Patients Undergoing Major Complex Spinal Instrumentation Surgery: Clinical Practice Guidelines from the Society for Neuroscience in Anesthesiology and Critical Care** *Journal of Neurosurgical Anesthesiology*
  Blacker, S. N., Vincent, A., Burbridge, M. A., Bustillo, M., Hazard, S. W., Heller, B., Nadler, J. W., Sullo, E., Lele, A. V.
  2021
- **Neurointensive Care Unit: Clinical Practice and Organization.** *Anesthesia and analgesia*
  Burbridge, M. A.
  2020; 131 (5): e225–e226
- **Accidental Injection of Propofol Into a Lumbar Drain** *Journal of Neurosurgical Anesthesiology*
  Burbridge, M. A., Jaffe, R. A.
  2020
- **Incidence of Anaphylaxis to Sugammadex in a Single-Center Cohort of 19,821 Patients** *Anesthesia and Analgesia*
  Burbridge, M. A.
  2020
- **Accidental Injection of Propofol Into a Lumbar Drain: The Role of ISO 80369-6 Compliant Neuro Connectors.** *Journal of neurosurgical anesthesiology*
  Burbridge, M. A., Jaffe, R. A.
  2020
- **The use of end-tidal argon to detect venous air embolism: foiled by "fake oxygen!"** *JOURNAL OF CLINICAL MONITORING AND COMPUTING*
  McAvoy, J., Jaffe, R., Burbridge, M., Schertz, T., Brock-Utne, J.
  2019; 33 (5): 925–26
- **Effect of Head Rotation on Jugular Vein Patency Under General Anesthesia** *CANADIAN JOURNAL OF NEUROLOGICAL SCIENCES*
  Burbridge, M. A., Min, J., Jaffe, R. A.
  2019; 46 (3): 355–57
- **Excipients in Anesthesia Medications** *ANESTHESIA AND ANALGESIA*
  Burbridge, M. A., Jaffe, R. A.
  2019; 128 (5): 891–900
- **Acetaminophen Does Not Reduce Postoperative Opiate Consumption in Patients Undergoing Craniotomy for Cerebral Revascularization: A Randomized Control Trial.** *Cureus*
  Burbridge, M. A., Stone, S. A., Jaffe, R. A.
  2019; 11 (1): e3863
- **Intraoperative Kirschner Wire Migration during Robotic Minimally Invasive Spine Surgery.** *Case reports in anesthesiology*
  Peterson, A. n., Ngai, L. K., Burbridge, M. A.
  2019; 2019: 9581285
- **An Anesthesia Attempt to Be Green: How Do You Waste Your Carbon Dioxide Absorbers?** *A&A practice*
  Burbridge, M. A., Chua, P. n., Jaffe, R. A., Pearl, R. G., Brock-Utne, J. G.
  2019
- **Paradoxical Critical Hyperkalemia After Acetazolamide for Cerebrovascular Reactivity Study: A Case Report.** *A&A practice*
  Burbridge, M. A., Jaffe, R. A.
  2019
- **Intracranial Neurosurgery** *Anesthesiologist's Manual of Surgical Procedures*
  Burbridge, M. A., Jaffe, R. A.
  Wolters Kluwer.2019; 6

- **Performance of Litholyme compared with Sodasorb carbon dioxide absorbents in a standard clinical setting.** *British journal of anaesthesia*
  Fowler, C. J., Burbridge, M. A., Jaffe, R. A., Brock-Utne, J. G.
  2019; 122 (1): e11–e12
- **A novel use of the precordial Doppler for verification of central venous access.** *Korean J Anesthesiol.*
  Burbridge, M. A.
  2019; 72 (76-77)
- **Intraoperative Transcranial Motor-evoked Potential Stimulation Does Not Seem to Cause Seizures.** *Journal of neurosurgical anesthesiology*
  Burbridge, M. A., Nguyen, V. n., Min, J. G., Jaffe, R. A., Ahuja, B. n., Shah, A. D., Lee, L. H., Cho, C. n., Sandoval, B. n., López, J. R.
  2019
- **Inaccurate Blood Pressure Readings in the Intensive Care Unit: An Observational Study.** *Cureus*
  Tse, B., Burbridge, M. A., Jaffe, R. A., Brock-Utne, J.
  2018; 10 (12): e3716
- **Case Report of an Awake Craniotomy in a Patient With Eisenmenger Syndrome.** *A&A practice*
  Heifets, B. D., Crawford, E., Jackson, E., Brodt, J., Jaffe, R. A., Burbridge, M. A.
  2018; 10 (9): 219-222
- **Fluid management concepts for severe neurological illness: an overview.** *Current opinion in anaesthesiology*
  Heifets, B. D., Tanaka, P. n., Burbridge, M. A.
  2018
- **Intraoperative tonic-clonic seizure under general anesthesia captured by electroencephalogram.** *100 Selected Case Reports from Anesthesia & Analgesia*
  Burbridge, M. A., Jaffe, R. A., Doufas, A. G., Lopez, J. R.
  Wolters Kluer.2018; 1
- **Dermographism: A rare cause of intraoperative hypotension and urticaria** *100 Selected Case Reports from Anesthesia & Analgesia*
  Burbridge, M. A.
  Wolters Kluer.2018; 1
- **High Risk of Aspiration in Patients With ReShape Intragastric Balloon Weight Loss System.** *Anesthesia and analgesia*
  Burbridge, M. A., Coffman, C.
  2017; 124 (2): 703
- **At What Hematocrit Should We Transfuse in Craniotomy?** *You're Wrong I'm Right: Dueling Authors Re-Examine Classic Teachings in Anesthesia*
  Burbridge, M.
  2017
- **High Flow Nasal Cannula, A Novel Approach to Airway Management in Awake Craniotomies.** *Journal of neurosurgical anesthesiology*
  Smith, S. C., Burbridge, M. n., Jaffe, R. n.
  2017
- **Intraoperative Tonic-Clonic Seizure Under General Anesthesia Captured by Electroencephalography: A Case Report** *A and A Case Reports*
  Burbridge, M. A., Jaffe, R. A., Doufas, A. G., Lopez, J. R.
  2017: 9–12
- **Ventriculoperitoneal Shunt Insertion Under Monitored Anesthesia Care in a Patient With Severe Pulmonary Hypertension.** *A & A case reports*
  Burbridge, M. A., Brodt, J., Jaffe, R. A.
  2016; 7 (2): 27-29
- **Dermographism: A Rare Cause of Intraoperative Hypotension and Urticaria.** *A & A case reports*
  Burbridge, M.
  2016; 7 (2): 41-43
- **Exparel®: A New Local Anesthetic with Special Safety Concerns.** *Anesthesia and analgesia*
  Burbridge, M., Jaffe, R. A.

2015; 121 (4): 1113-1114

- **Antiepileptic and Other Neurologically Active Drugs** *Stoelting's Pharmacology and Physiology in Anesthetic Practice*
  Flood, P., Burbridge, M.
  Wolters Kluer.2015; 5
- **Awake craniotomy in a developmentally delayed blind man with cognitive deficits** *CANADIAN JOURNAL OF ANESTHESIA-JOURNAL CANADIEN D ANESTHESIE*
  Burbridge, M., Raazi, M.
  2013; 60 (4): 399-403
- **Health Quality Improvement Using Instructional Communication and Teamwork Videos: An Outcome Study** *Creative Education*
  Cowie, N., Bowen, A., Kuling, S., Premkumar, K., Burbridge, M., Martel, J.
  2013; 5 (1)
- **Teamwork and Communication in Acute Care: A Teaching Resource for Healthcare Professionals**
  Cowie, N., Premkumar, K., Bowen, A., Kuling, S., Kawchuk, J., Rooney, M., Morris, G., Burbridge, M., Silvertson, J., Campbell, D., Boechler, K.
  MedEd Portal.
  2012
- **The long-term functional outcome of type II odontoid fractures managed non-operatively** *EUROPEAN SPINE JOURNAL*
  Butler, J. S., Dolan, R. T., Burbridge, M., Hurson, C. J., O'Byrne, J. M., Mccormack, D., Synnott, K., Poynton, A. R.
  2010; 19 (10): 1635-1642