

**DAVID N. FLYNN, MD, MBA**

*Curriculum vitae*

Updated May 2025

**Contact Information:**

*Address:* 101 Westside Dr, Chapel Hill, NC 27516

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**Education:**

**Postgraduate Training:**

2013 –2016                      Residency: Department of Anesthesiology, Hospital of the University of Pennsylvania, Philadelphia, PA.

2012 –2013                      Internship: Department of Anesthesiology, Hospital of the University of Pennsylvania, Philadelphia, PA.

**Professional Education:**

2007-2012                      Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA.  
Doctor of Medicine (M.D.)

2010-2012                      Wharton School of Business, University of Pennsylvania, Philadelphia, PA.  
Master of Business Administration (M.B.A.), healthcare management

**Undergraduate Education:**

2002-2005                      University of Wisconsin, Madison, WI.  
Bachelor of Science (B.S.), molecular biology

2001-2002                      Washington University in St. Louis, School of Engineering, St. Louis, MO.  
Undergraduate studies in Biomedical Engineering

**Additional Training and Education:**

2021                              LEAN Leadership in Healthcare Systems. New Hanover Regional Medical Center, Wilmington, NC.

2021                              Introduction to Programming for Health Informatics (HCIP 5376). UNC Charlotte, Charlotte, NC.

2019                              Healthcare Reimbursement (HPM 743). UNC Gillings School of Public Health, Chapel Hill, NC.

2017-2018                      Leadership Fellow, Mission Health System & CTI Physician Leadership Institute. Asheville, NC.  
Selected and sponsored by Mission Health executive team.

2008 Legal Aspects of Entrepreneurship, University of Pennsylvania School of Law, Philadelphia, PA.

**Board Certification:**

2018 American Board of Anesthesiology (Certificate #59263)

**Certifications:**

2021 American Society of Anesthesiologists Diagnostic Point of Care Ultrasound (POCUS) Certificate.

2021 Certified Professional in Healthcare Quality (CPHQ), National Association for Healthcare Quality.

2021 Certified Healthcare Financial Professional (CHFP), Healthcare Financial Management Association.

2020 Neonatal Resuscitation Program Certification – NRP (expires 2022).

2019 Basic Certificate in Quality and Safety, Institute for Healthcare Improvement.

2016 Pediatric Advanced Life Support – PALS (recertified 2022, expires 2024).

2016 Advanced Trauma Life Support – ATLS (COVID extension, expires 2023).

2016 Federal DEA Registration (renewed 2019).

2012 Advanced Cardiac Life Support – ACLS (recertified 2022, expires 2024).

**Medical Licensure:**

2018-2023 State of Hawaii (#MD-19834)

2016-present State of North Carolina (#217619)

**Employment History:**

01/2024-present Attending Anesthesiologist, East Carolina Anesthesia Associates, PLLC. Raleigh, NC.

04/2023-01/2024 Associate Professor, Department of Anesthesiology, University of North Carolina School of Medicine, Chapel Hill, NC.

01/2019-03/2023 Assistant Professor, Department of Anesthesiology, University of North Carolina School of Medicine, Chapel Hill, NC.

11/2016-12/2018 Attending Anesthesiologist, Mission Health System, Asheville, NC.

05/2011-08/2011 Summer Associate, Accolade, Inc., Plymouth Meeting, PA.

- 02/2011-05/2011 Business Analyst, Office of Corporate Alliances, University of Pennsylvania School of Medicine, Philadelphia, PA.
- 11/2011-05/2012 Founder, Prepera, LLC (MCAT Tutoring Firm), Philadelphia, PA.
- 09/2005-05/2006 Fulbright Scholar, Department of Slow Viruses, Pasteur Institute, Paris, France.

**Administrative & Leadership Responsibilities:**

- 2024-present Chief of Anesthesia, WakeMed North Hospital, Raleigh, NC.
- 2020-2021 Physician Mortality Champion, UNC Hospitals, Chapel Hill, NC.
- 2020-2021 Medical Director for Anesthesia Services, Chatham Hospital, Siler City, NC.
- 2017-2018 Anesthesia Quality Officer, Mission Health System, Asheville, NC.
- 2017-2018 Mission Health Lead: American Society of Anesthesiologists (ASA)/Premier Hospital Innovation Improvement Network (HIIN) Safer Post-Operative Pain Management Pilot. Asheville, NC.

**Honors and Awards:**

- 2023 Most Academically/Administratively Product Faculty Member (#1 out of 96). UNC Department of Anesthesiology. Chapel Hill, NC.
- 2023 Faculty Research Honor Roll. UNC Department of Anesthesiology. Chapel Hill, NC.
- 2022 Robert L. Barber Certification Award. Awarded for achieving the highest score on the HFMA Certification Exam in 2021. Healthcare Financial Management Association of North Carolina. Pinehurst, NC.
- 2021 UNC-Medical Center Quality and Safety Team Award. Physician Lead: Mortality Reduction. Special recognition for sustained improvement. Chapel Hill, NC.
- 2018 Mission Health System Quality Team Award for 2018. Team leader: Anesthesia Opioid Reduction Initiative. Asheville, NC.
- 2012 Lawrence D. Dorr Award for Most Outstanding Paper in Surgical Techniques and Technologies. American Association of Hip and Knee Surgeons Annual Meeting, Dallas, TX.
- 2011 First Year Honors (top 20% of MBA class), Wharton School of Business, University of Pennsylvania. Philadelphia, PA.
- 2011 Ford Fellowship, Mack Center for Technological Innovation, Wharton School of Business, University of Pennsylvania. Philadelphia, PA.

2010-2012	Kaiser Fellowship Recipient (merit-based scholarship), Wharton School of Business, Department of Healthcare Management, University of Pennsylvania. Philadelphia, PA.
2010-2012	Joseph Wharton Fellowship (merit-based scholarship), Wharton School of Business, University of Pennsylvania. Philadelphia, PA.
2009	Finalist, Medical Student Abstract Competition, American College of Physicians National Conference, Philadelphia, PA.
2008-2012	Mayo Foundation Scholarship, Mayo Clinic College of Medicine. 4-year merit-based scholarship. Rochester, MN.
2007-2011	Merit Scholarship, Joseph and Eliza Bongiovanni Fund, University of Pennsylvania School of Medicine. 4-year merit-based scholarship. Philadelphia, PA.
2005-2006	Fulbright Scholarship Recipient. Bureau of Educational and Cultural Affairs, U.S. Department of State. Washington, D.C.
2005	Graduation with Distinction (Top 20% of class). University of Wisconsin-Madison. Madison, WI.
2005	Graduation with Honors. College of Letters & Science. University of Wisconsin-Madison. Madison, WI.
2005	Phi Beta Kappa, University of Wisconsin–Madison chapter. Madison, WI.
2003	Phi Kappa Phi, University of Wisconsin–Madison chapter. Madison, WI.
2001-2005	Hiawatha Valley Scholarship, 4-year merit scholarship. Winona, MN.
2002-2005	Deans List, 4 of 6 semesters, University of Wisconsin-Madison. Madison, WI.
2001-2002	Dean’s List, 2 of 2 semesters, Washington University in St. Louis. St. Louis, MO.

### **Bibliography & Products of Scholarship:**

#### **Book Chapters:**

1. **Flynn DN** and Walls JD. Hypoparathyroidism. In: Fleisher LA, Roizen MF, Roizen J, eds. *Essence of Anesthesia Practice*. 4<sup>th</sup> ed. Philadelphia, PA. Elsevier; 2017. p 229.

#### **Book Chapters: Submitted**

1. **Flynn DN**, Dengler E, Lund ET. Competitor analysis. In: Clinical and Medical Innovation in Anesthesiology. Philadelphia, PA. Elsevier, 8 pages. (Submitted October 2021; final prints submitted April 2023)

2. Godbole PG, Bullard TL, **Flynn DN**. Choosing an entity structure for your business. In: *Clinical and Medical Innovation in Anesthesiology*. Philadelphia, PA. Elsevier, 8 pages. (Submitted May 2021; final prints submitted April 2023)

#### **Refereed (Peer Reviewed) Published Works:**

1. Shah S, Nayfeh T, Hasan B, Urtecho M, Firwana M, Saadi S, Abd-Rabu R, Nanaa A, **Flynn DN**, Rajjoub NS, Hazem W, Seisa MO, Hassett LC, Spyropoulos AC, Douketis JD, Murad MH. Perioperative management of vitamin K antagonists and direct oral anticoagulants: a systematic review and meta-analysis. *Chest* (2022);S0012-3692(22)04202-7.
2. Sisk JM and **Flynn DN**. Anaesthesia recommendations for patients with propionic acidemia. *Orphanet Encyclopedia*. <https://www.orphananesthesia.eu/en/rare-diseases/published-guidelines/propionic-acidemia.html>
3. Schoenherr JW, Gonzalez M, Ricardo S, Park M, Lee Z, Cobb K, Howard C, **Flynn D**, Li Q, Grant S, Bullard T. Quality of recovery after rotator cuff repair with interscalene liposomal bupivacaine vs. interscalene nerve catheter. *Orthopedic Journal of Sports Medicine* (2022);10(11):23259671221134819.
4. Shah S, Urtecho M, Firwana M, Nayfeh T, Hasan B, Naana A, Saadi S, **Flynn DN**, Abd-Rabu R, Seisa M, Rajjoub R, Hassett L, Spyropoulos A, Douketis JD, Murad HM. Perioperative management of antiplatelet therapy: a systematic review and meta-analysis. *Mayo Clinic Proceedings: Innovation, Quality, and Outcomes* (2022);6(6):564-573.
5. Doyal AS, Doyal HE, **Flynn DN**, Schoenherr J, Kwon JJ, Kumar P. Electrocardiographic interference on bispectral index monitor: A case of crossed wires. *Cureus* 14(9):e29511.
6. Low AL, Abdel AM, Nanda M, Doyal A, Schoenherr JW, Grant SA, **Flynn DN**. Staining of hypoglossal and vagus nerves observed following ultrasound guided distal glossopharyngeal nerve block in cadavers. *J Clin Anesth* (2022):83:110986.
7. Velagapudi M, Nair AA, Strodtbeck W, **Flynn DN**, Howell K, Liberman JS, Strunk JD, Horibe M, Harika R, Alamdari A, Hembrador S, Kantamneni S, Nair BG. Evaluation of machine learning models as decision aids for anesthesiologists. *Journal Clin Monit Comput* (2022). <https://doi.org/10.1007/s10877-022-00872-8> (online, ahead of print).
8. **Flynn DN**, Eskildsen J, Levene JL, Allan JD, Bullard TY, Cobb KW. Pneumothorax following breast surgery at an ambulatory surgery center. *Cureus* (2022):14(5):e24924.
9. Bullard TY, **Flynn DN**, Cobb KW. Anesthesia awareness. In: *StatPearls*. Treasure Island, FL. StatPearls Publishing. June 2022. PMID 35881743.
10. Schoenherr JW, Doyal A, **Flynn DN**. Suprascapular block. In: *StatPearls*. Treasure Island, FL. StatPearls Publishing. April 2022. PMID 35593863.

11. Doyal A, **Flynn DN**, Schoenherr JW. Motor evoked potentials. In: *StatPearls*. Treasure Island, FL. StatPearls Publishing. April 2022. PMID 33593855.
12. **Flynn DN**, Rojas AF, Low AL, Bullard TL, Stearns J, Vishnevsky BL, Armbruster JR, Nanda M, Stander S, Schoenherr JW, McMillan DT, Krakowski JC, Grant SA. The road not taken: An investigation of injectate spread between the thoracic paravertebral space and the quadratus lumborum. *J Clin Anesth* (2022);3(79):110697.
13. Lund E, Low AB, Allan JD, Puentes JA, **Flynn DN**. Anesthetic challenges posed by heavy kratom users. *Cureus* (2022);14(3):e22864.
14. **Flynn DN**, Schoenherr JW, Doyal A. Gastric Ultrasound. In: *StatPearls*. Treasure Island, FL. StatPearls Publishing. March 2022. PMID 35593832.
15. **Flynn DN**, Lund ET, Grant SA. Review of the ASA Physical Status Classification: Comment. *Anesthesiology* (2022);136(5):865-866.
16. Reibel Y, **Flynn DN**, Petersen A, Flynn PM. Acceptance of dental office obstructive sleep apnea screening among Minnesota State Fair Attendees. *J Dent Hyg* (2021);97(1):36-42.
17. Teeple AJ, **Flynn D**, Denslow S, Hooper V. Exploratory analysis of impact of gabapentin on incidence of postoperative nausea and vomiting in patients undergoing knee and hip arthroplasty with neuraxial anesthesia. *AANA J* (2020);88(5):391-396.
18. Liu J, **Flynn DN**, Liu WM, Fleisher LA, Elkassabany NM. Hospital-based acute care within 7 days of discharge after outpatient arthroscopic shoulder surgery. *Anesthesia and Analgesia* (2018);126(2):600-5.
19. Clement RC, Derman PB, Kheir MM, Soo AE, **Flynn DN**, Levin LS, Fleisher L. Risk adjustment for Medicare total knee arthroplasty bundled payments. *Orthopedics* (2016);39(5):e911-6.
20. Clement RC, Soo A, Derman PB, **Flynn DN**, Speck RM, Levin LS, Fleisher L. What incentives are created by Medicare payments for total hip arthroplasty? *Journal of Arthroplasty* (2016);31(9 Suppl):69-72.
21. Kheir MM, Clement RC, Derman PB, **Flynn DN**, Speck RM, Levin LS, Fleisher LA. Are there identifiable risk factors and causes associated with unplanned readmissions following total knee arthroplasty? *Journal of Arthroplasty* (2014);29(11):2192-6.
22. Clement RC, Kheir MM, Derman PB, **Flynn DN**, Speck RM, Levin LS, Fleisher LA. What are the economic consequences of unplanned readmissions after TKA? *Clinical Orthopaedics and Related Research* (2014);472(10):3134-41.
23. **Flynn DN**, Speck RM, Mahmoud NN, David G, Fleisher LA. The impact of complications following open colectomy on hospital finances: A retrospective cohort study. *Perioperative Medicine* (2014);3(1):1.

24. Clement RC, Derman PB, Graham DS, Speck RM, **Flynn DN**, Levin LS, Fleisher LA. Risk factors, causes, and the economic implications of unplanned readmissions following total hip arthroplasty. *Journal of Arthroplasty* (2013);28(8 Suppl):7-10.
25. Bassler D, Briel M, Montori VM, Lane M, Glasziou P, Zhou Q, Heels-Ansdell D, Walter SD, Guyatt GH; STOPIT-2 Study Group, **Flynn DN**, Elamin MB, Murad MH, Abu Elnour NO, Lampropulos JF, Sood A, Mullan RJ, Erwin PJ, Bankhead CR, Perera R, Ruiz Culebro C, You JJ, Mulla SM, Kaur J, Nerenberg KA, Schünemann H, Cook DJ, Lutz K, Ribic CM, Vale N, Malaga G, Akl EA, Ferreira-Gonzalez I, Alonso-Coello P, Urrutia G, Kunz R, Bucher HC, Nordmann AJ, Raatz H, da Silva SA, Tuche F, Strahm B, Djulbegovic B, Adhikari NK, Mills EJ, Gwadry-Sridhar F, Kirpalani H, Soares HP, Karanickolas PJ, Burns KE, Vandvik PO, Coto-Yglesias F, Chripim PP, Ramsay T. Stopping randomized trials early for benefit and estimation of treatment effects: a systematic review and meta-regression analysis. *JAMA* (2010);303(12):1180-7.
26. Yong PL, Bigman C, **Flynn DN**, Mittermaier D, Long JA. Messages about black-box warnings: A comparative analysis of reports from the FDA and lay media in the US. *Drug Safety* (2009);32(12):1147-57.
27. Journo C, Filipe J, About F, Chevalier SA, Afonso PV, Brady JN, **Flynn D**, Tangy F, Israël A, Vidalain PO, Mahieux R, Weil R. NRP/Optineurin cooperates with TAX1BP1 to potentiate the activation of NF- $\kappa$ B by human T-lymphotropic virus type 1 tax protein. *PLoS Pathogens* (2009);5(7):e1000521.
28. Briel M, Lane M, Montori VM, Bassler D, Glasziou P, Malaga G, Akl EA, Ferreira-Gonzalez I, Alonso-Coello P, Urrutia G, Kunz R, Culebro CR, da Silva SA, **Flynn DN**, Elamin MB, Strahm B, Murad MH, Djulbegovic B, Adhikari NKJ, Mills EJ, Gwadry-Sridhar F, Kirpalani H, Soares HP, Abu Elnour NO, You JJ, Karanickolas PJ, Bucher HC, Lampropulos JF, Nordmann AJ, Burns KEA, Mulla SM, Raatz H, Sood A, Kaur J, Bankhead CR, Mullan RJ, Nerenberg KA, Vandvik PO, Coto-Yglesias F, Schünemann H, Tuche F, Chripim PPM, Cook DJ, Lutz K, Ribic CM, Vale N, Erwin PJ, Perera R, Zhou Q, Heels-Ansdell D, Walter SD, Guyatt GH. Stopping randomized trials early for benefit: a protocol of the Study Of Trial Policy Of Interim Truncation-2 (STOPIT-2). *Trials* (2009);10(1):49.
29. Elamin MB, **Flynn DN**, Bassler D, Briel M, Alonso-Coello P, Karanickolas PJ, Guyatt GH, Malaga G, Furukawa TA, Kunz R, Schunemann H, Murad MH, Barbui C, Cipriani A, Montori VM. Choice of data extraction tools for systematic reviews depends on resources and review complexity. *Journal of Clinical Epidemiology* (2009);62(5):506-10.
30. Mullan RJ, **Flynn DN**, Carlberg B, Tleyjeh IM, Kamath CC, LaBella ML, Erwin PJ, Guyatt GH, Montori VM. Systematic reviewers commonly contact study authors but do so with limited rigor. *Journal of Clinical Epidemiology* (2009);62(2):138-42.
31. Casey ET, Murad MH, Rizvi AZ, Sidawy AN, McGrath MM, Elamin MB, **Flynn DN**, McCausland FR, Vo DH, El-Zoghby Z, Duncan AA, Tracz MJ, Erwin PJ, Montori VM. Surveillance of arteriovenous hemodialysis access: A systematic review and meta-analysis. *Journal of Vascular Surgery* (2008);48:48S-54S.
32. Murad MH, Elamin MB, Sidawy AN, Malaga G, Rizvi AZ, **Flynn DN**, Casey ET, McCausland FR, McGrath MM, Vo DH, El-Zoghby Z, Duncan AA, Tracz MJ, Erwin PJ, Montori VM. Autogenous

versus prosthetic vascular access for hemodialysis: A systematic review and meta-analysis. *Journal of Vascular Surgery* (2008);48:345-475.

33. Murad MH, Sidawy AN, Elamin MB, Rizvi AZ, **Flynn DN**, McCausland FR, McGrath MM, Vo DH, El-Zoghby Z, Casey ET, Duncan AA, Tracz MJ, Erwin PJ, Montori VM. Timing of referral for vascular access placement: A systematic review. *Journal of Vascular Surgery* (2008);48:315-335.
34. Murad MH, **Flynn DN**, Elamin MB, Guyatt GH, Hobson RW, Erwin PJ, Montori VM. Endarterectomy vs. stenting for carotid artery stenosis: A systematic review and meta-analysis. *Journal of Vascular Surgery* (2008);48(2):487-93.
35. Gandhi GY, Murad MH, Fujiyoshi A, Mullan RJ, **Flynn DN**, Elamin MB, Swiglo BA, Isley WL, Guyatt GH, Montori VM. Patient-important outcomes in registered diabetes trials. *JAMA* (2008);299(21):2543-49.
36. Gandhi GY, Murad MH, **Flynn DN**, Erwin PJ, Cavalcante AB, Bay Nielsen H, Capes SE, Thorlund K, Montori VM, Devereaux PJ. Effect of perioperative insulin infusion on surgical morbidity and mortality: Systematic review and meta-analysis of randomized trials. *Mayo Clinic Proceedings* (2008);83(4):418-430.
37. Swiglo BA, Cosma M, **Flynn DN**, Kurtz DM, LeBella ML, Mullan RJ, Erwin PJ, Montori VM. Clinical review: Antiandrogens for the treatment of hirsutism: A systematic review and meta-analysis of randomized controlled trials. *Journal of Clinical Endocrinology & Metabolism* (2008);93(4):1153-60.
38. Cosma M, Swiglo BA, **Flynn DN**, Kurtz DM, LeBella ML, Mullan RJ, Elamin MB, Erwin PJ, Montori VM. Clinical review: Insulin sensitizers for the treatment of hirsutism: A systematic review and meta-analyses of randomized controlled trials. *Journal of Clinical Endocrinology & Metabolism* (2008);93(4):1135-42.
39. Gandhi GY, Murad MH, **Flynn DN**, Elamin MB, Erwin PJ, Montori VM, Kudva YC. Immunotherapeutic agents in type 1 diabetes: A systematic review and meta-analysis of randomized controlled trials. *Clinical Endocrinology* (2008);69(2):244-52.

#### **Refereed (Peer Reviewed) Published Abstracts**

1. Journo C, Gessain A, **Flynn D**, About F, Filipe J, Afonso PV, Vidalain PO, Mahieux R, Weil R, Chevalier SA. Modulation of HTLV-1 Tax Protein Ubiquitination by cellular optineurin: function implications for the NF- $\kappa$ B pathway activation. *AIDS Research and Human Retroviruses* (2009);25(11):1228-1228.
2. Gandhi G, Murad M, Fujiyoshi A, Mullan R, **Flynn D**, Elamin M, Swiglo B, Isley W, Guyatt G, Montori V. Patient important outcomes in diabetes trials. Novel use of trial registries to forecast the future. *Diabetes* (2008) 57: A192-A192, Suppl 1.
3. Gandhi GY, Murad MH, Kudva YC, **Flynn DN**, Elamin MB, Erwin PJ, Montori VM. Preservation of Beta-Cell Function by Non-Antigen Based Immunotherapy in New Onset Type 1 Diabetes: A

Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Diabetes* (2007) 56: A54-A55, Suppl 1.

4. Gandhi GY, Murad MH, **Flynn DN**, Devereaux PJ, Erwin PJ, Nielsen HB, Cavalcante AB, Montori VM. Perioperative Insulin Infusion: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Diabetes* (2007) 56: A54-A55, Suppl 1.
5. Swiglo BA, Cosma M, **Flynn DN**, Kurtz DM, LeBella ML, Mullan RJ, Erwin PJ, Montori VM. Antiandrogens in Hirsutism: A Systematic Review and Meta-analyses. *ENDO 2007 Research Summaries*: P2-340.
6. Cosma M, Swiglo BA, **Flynn DN** Kurtz DM, LeBella ML, Mullan RJ, Erwin PJ, Montori VM. Insulin Sensitizers in Hirsutism: A Systematic Review and Meta-analyses of Randomized Controlled Trials. *ENDO 2007 Research Summaries*: P2-337.

### **Refereed Oral Presentations and (Peer Reviewed) Unpublished Abstracts**

#### **Oral Presentations**

1. Soltis J, Ossman P, **Flynn D**. Try a different tack. A journey into mortality improvement. 2021 Vizient Connections Summit. Las Vegas, NV. October, 2021.
2. **Flynn DN**, Liu WM, Elkassabany NM, Liu JB. Incidence, risk factors, and diagnoses associated with hospital-based acute care within 7-days of outpatient arthroscopic shoulder surgery. Pennsylvania Anesthesia Resident Research Conference, Hershey, PA. May 2016.
3. Clement RC, Kheir MM, Soo A, Derman PB, **Flynn D**, Levin LS, Fleisher L. Will TKA Bundled Payments without Risk Adjustment Create an Incentive to “Cherry Pick”? American Academy of Orthopaedic Surgeons Annual Meeting, Orlando, FL. March, 2016.
4. Clement RC, Kheir MM, Soo A, Derman PB, **Flynn D**, Levin LS, Fleisher L. How will the Financial Incentive to Provide THA for High-risk Patients Change with Bundled Payments without Risk Adjustment? American Academy of Orthopaedic Surgeons Annual Meeting, Orlando, FL. March 2016.
5. Clement RC, Soo A, Kheir MM, Derman PB, **Flynn D**, Levin LS, Fleisher L. Medicare Payments for THA Create a Financial Incentive Favoring Low-risk Patients. American Academy of Orthopaedic Surgeons Annual Meeting, Orlando, FL. March, 2016.
6. Clement RC, Kheir MM, Derman PB, **Flynn DN**, Speck RM, Levin RS, Fleisher LA. How will financial incentives to provide THA for sicker patients change with bundled payments? American Academy of Orthopaedic Surgeons Annual Meeting, Las Vegas, NV. March 2015.
7. Clement RC, Kheir MM, Derman PB, **Flynn DN**, Speck RM, Levin RS, Fleisher LA. What incentives are created by Medicare payments for total hip arthroplasty? American Academy of Orthopaedic Surgeons Annual Meeting, Las Vegas, NV. March 2015.

8. Clement RC, McCauliffe CL, Kheir MM, Derman PB, **Flynn DN**, Speck RM, Levin RS, Fleisher LA. What are the economic consequences of unplanned readmissions following THA? American Academy of Orthopaedic Surgeons Annual Meeting, Las Vegas, NV. March 2015.
9. Clement RC, Kheir MM, Derman PB, **Flynn DN**, Speck RM, Levin RS, Fleisher LA. What incentives are created by Medicare payments for total knee and total hip arthroplasty? American Academy of Hip and Knee Surgeons Annual Meeting, Dallas, TX. November 2014.
10. Clement RC, Kheir MM, Derman PB, **Flynn DN**, Speck RM, Levin RS, Fleisher LA. What are the economic consequences of unplanned readmissions after TKA? American Academy of Orthopaedic Surgeons Annual Meeting, New Orleans, LA. March 2014.
11. Clement RC, Kheir MM, Derman PB, **Flynn DN**, Speck RM, Levin RS, Fleisher LA. Are there identifiable risk factors and causes associated with unplanned readmissions following total knee arthroplasty? American Academy of Orthopaedic Surgeons Annual Meeting, New Orleans, LA. March, 2014.
12. Clement RC, Kheir MM, Derman PB, **Flynn DN**, Speck RM, Levin RS, Fleisher LA. Unplanned readmissions after TKA: Risk factors, causes, financial implications, and potential impact of health care reform. North Carolina Orthopaedic Association Annual Meeting. White Sulphur Springs, WV. November 2013.
13. Clement RC, Derman PB, **Flynn DN**, Speck RM, Levin LS, Fleisher LA. Risk factors, causes, and the financial implications of unplanned readmissions after total hip arthroplasty. American Association of Hip and Knee Surgeons Annual Meeting, Dallas, TX. November 2012.
14. Gandhi GY, Murad MH, Kudva YC, **Flynn DN**, Elamin MB, Erwin PJ, Montori VM. Preservation of beta-cell function by non-antigen based immunotherapy in new onset type 1 diabetes: A systematic review and meta-analysis of randomized controlled trials. American Diabetes Association 67th Scientific Sessions, Chicago, IL. June 2007.

#### **Poster Presentations**

1. Magin JC, Wrobel J, An X, **Flynn D**, McLean D, Grant SA. Using venous excess ultrasound (VExUS) grading to assess perioperative volume status among patients undergoing non-cardiac surgeries: a comprehensive pilot study. International Anesthesia Research Society Annual Meeting, Denver, CO. April 2023.
2. Wrobel J, Magin J, Xinming A, **Flynn D**, Grant S. Comparing preoperative IVC collapsibility and intraoperative hypotension in ERAS vs. inpatient urgent surgery patients. International Anesthesia Research Society Annual Meeting, Denver, CO. April 2023.
3. Doyal AS, Choucair A, Doyal H, Giberson S, **Flynn D**, Schoenherr J, Tessman P, Merlo A, Xingming A, Kumar P. Surgical sponge vanishing act: Failure of radio frequency identification during LVAD placement in a cadaveric mode. UNC School of Medicine John B. Graham Student Research Day. Chapel Hill, NC. November 2022.

4. Willis E, **Flynn D**, Lund E. Kratom: A powerful drug predisposing to perioperative problems. American Society for Anesthesiologists Annual Meeting, New Orleans, LA. October 2022.
5. Clemens E, **Flynn D**, Lund E. The nose knows: Nasal intubation and endoscopy for a patient with acute food impaction and microstomia. American Society for Anesthesiologists Annual Meeting, New Orleans, LA. October 2022.
6. Doyal AS, Choucair A, Doyal H, Giberson S, **Flynn D**, Schoenherr J, Tessman P, Merlo A, Xingming A, Kumar P. Compromised Detection of Surgical Sponges Around Implantable Devices—Failure of Radio Frequency Identification. American Society for Anesthesiologists Annual Meeting, New Orleans, LA. October 2022.
7. Abdel A, **Flynn D**, Nanda M, Doyal A, Schoenherr J, Grant S, Low A. Investigation of dye spread following ultrasound guided distal glossopharyngeal block. The Carolinas and Tennessee Anesthesiology 2022 Annual Meeting, Charleston, SC. September 2022.
8. Rojas RF, Grant SA, Low AL, Bullard TL, Stearns J, Vishnevsky MA, Armbruster JR, Nanda M, Stander S, Schoenherr JW, McMillan DT, Krakowski JC, **Flynn DN**. Anterior quadratus lumborum block and the thoracic paravertebral space – Too good to be true? American Society for Regional Anesthesia and Pain Medicine Annual Meeting, Las Vegas, NV. April 2022.
9. Low AL, **Flynn DN**, Grant SA, Nanda M, Anumudu C. Percutaneous glossopharyngeal nerve block: An emerging option for awake intubation? American Society for Regional Anesthesia and Pain Medicine Annual Meeting, Las Vegas, NV. April 2022.
10. Schoenherr JW, Gonzalez M, Serrano R, Cobb K, **Flynn DN**, Howard C, Park M, Lee Z, Li Q, Grant SA, Bullard TL. Interscalene liposomal bupivacaine vs. interscalene nerve catheter for arthroscopic rotator cuff repair. American Society for Regional Anesthesia and Pain Medicine Annual Meeting, Las Vegas, NV. April 2022.
11. Tripi J, **Flynn DN**, Smeltz AM. ASA-PS Classification for patients with CAD. Are we all on the same page? American Society for Anesthesiologists Annual Meeting, San Diego, CA. October 2021.
12. Velagapudi M, Nair AN, Strodtbeck W, **Flynn D**, Howell K, Liberman JS, Strunk JD, Horibe M, Nair BG. Evaluation of machine learning models as decision aids for anesthesiologists. International Anesthesia Research Society Annual Meeting, Virtual. May 2021.
13. D'Ercole F, Stander S, McMillan D, Levi M, Rhodes H, Lamm M, **Flynn D**, Dhanda V. Quality Improvement of Pyxis Inventory Using Radio Frequency Identification Technology. American Society for Anesthesiologists Annual Meeting, Virtual. October 2020.
14. Leopold R, Allred CA, Greenberg M, McNulty L, Bhatia M, **Flynn DN**, Chen F. The majority of ASA assessments are incorrect without education. American Society for Anesthesiologists Annual Meeting, Virtual. October 2020.
15. Teeple AJ, **Flynn DN**, Denslow S, Hooper V. Impact of opioid sparing analgesic protocol on incidence of PONV in knee and hip arthroscopy patients with neuraxial anesthesia. 8<sup>th</sup> Annual

Cone Health/AHEC Research, Evidence Based Practice, and Quality Improvement Symposium. Greensboro, NC. November 2019.

16. Teeples AJ, **Flynn DN**, Denslow S, Hooper V. Impact of opioid sparing analgesic protocol on incidence of PONV in knee and hip arthroscopy patients with spinal anesthesia. Annual North Carolina Nurses Association Convention. Winston-Salem, NC. September 2019.
17. Teeples AJ, **Flynn DN**, Denslow S, Hooper V. Impact of gabapentin and dexamethasone on incidence of PONV in knee and hip arthroscopy patients with neuraxial anesthesia. North Carolina Organization of Nursing Leaders. Greensboro, NC. March 2019.
18. **Flynn DN**, Liu WM, Elkassabany NM, Liu JB. Welcome back! Hospital-based acute care after discharge following outpatient arthroscopic shoulder surgery. American Society for Regional Anesthesia and Pain Medicine (ASRA) Annual Meeting, New Orleans, LA. March, 2016.
19. Clement RC, Kheir MM, Soo A, Derman PB, **Flynn DN**, Speck RM, Levin RS, Fleisher LA. How will financial incentives to provide TKA & THA for high-risk patients change with bundled payments? American Academy of Hip and Knee Surgeons Annual Meeting, Dallas, TX. November 2015.
20. Clement RC, Kheir MM, Derman PB, **Flynn DN**, Speck RM, Levin RS, Fleisher LA. How will financial incentives to provide TKA for sicker patients change with bundled payments? American Academy of Hip and Knee Surgeons Annual Meeting, Dallas, TX. November 2014.
21. Clement RC, Kheir MM, Derman PB, **Flynn DN**, Speck RM, Levin RS, Fleisher LA. What are the economic consequences of unplanned readmissions following THA? American Academy of Hip and Knee Surgeons Annual Meeting, Dallas, TX. November 2014.
22. **Flynn DN**, Speck RM, David G, Fleisher LA. Hospital costs associated with complications following open colectomy. American Society of Anesthesiologists Annual Meeting, San Francisco, CA. October 2013.
23. Clement RC, Derman PB, **Flynn DN**, Speck RM, Levin LS, Fleisher LA. Risk factors, causes, and the financial implications of unplanned readmissions after total knee arthroplasty. American Association of Hip and Knee Surgeons Annual Meeting, Dallas, TX. November 2012.
24. **Flynn DN**, Bigman C, Yong PL. Reporting of black-box warnings for prescription drugs by newspapers and the associated press. American College of Physicians National Meeting, Medical Student Competition, Philadelphia, PA. April 2009.
25. Gandhi GY, Murad HM, Fujiyoshi A, Mullan RJ, **Flynn DN**, Elamin MB, Swiglo BA, Isley W, Guyatt GH, Montori VM. Patient-important outcomes in diabetes trials: Novel use of trial registries to forecast the future. American Diabetes Association 68th Scientific Sessions, San Francisco, CA. June 2008.
26. Cosma M, Swiglo BA, **Flynn DN**, Kurtz DM, LeBella ML, Mullan RJ, Erwin PJ, Montori VM. Insulin sensitizers in hirsutism: A systematic review and meta-analyses of randomized controlled trials. The Endocrine Society 89th Annual Meeting, Toronto, ON. June 2007.

27. Swiglo BA, Cosma M, **Flynn DN**, Kurtz DM, LeBella ML, Mullan RJ, Erwin PJ, Montori VM. Antiandrogens in hirsutism: A systematic review and meta-analyses. The Endocrine Society 89th Annual Meeting, Toronto, ON. June 2007.
28. Ghandi GY, Murad MH, **Flynn DN**, Devereaux PJ, Erwin PJ, Nielsen HB, Cavalcante AB, Montori VM. Perioperative insulin infusion: A systematic review and meta-analysis of randomized controlled trials. American Diabetes Association 67th Scientific Sessions, Chicago, IL. June 2007.

### **Panels**

1. **Flynn DN**. Reducing opioid-related harm: Multiple perspectives. 2018 Premier Inc. Breakthroughs Conference and Exhibition. Nashville, TN. June 2018. Invited.

### **Other Products of Scholarship**

1. Lund E, Whitten A, Middleton R, Phlippeau J, **Flynn DN**. Converting Peri-Anesthesia Care Units into COVID-19 Critical Care Units. Anesthesiology News. April 30, 2020.
2. **Flynn DN**. Brining MRI scanners to the brachytherapy suite. A study of innovation in the field of radiation oncology. Mack Institute for Innovation Research, Wharton School of Business, University of Pennsylvania. Philadelphia, PA. April 2012.  
<https://mackinstitute.wharton.upenn.edu/tag/david-flynn/>

### **Teaching Activities:**

#### **Course Director**

2022-2023	Medical Student POCUS Elective, Co-Director UNC-Chapel Hill School of Medicine
2022-2023	Transition to Practice Program, Assistant Director UNC-Chapel Hill Department of Anesthesiology
2020-2024	Personal Finance Lecture Series, Assistant Director UNC-Chapel Hill Department of Anesthesiology

#### **Lectures to UNC Medical Students**

March 20, 2023	Personal Finance
March 20, 2023	Student Loan Management
March 22, 2022	It's Payback Time: Personal Finance and Student Loan Management.
March 23, 2020	Malignant hyperthermia.
February 26, 2020	Malignant hyperthermia.
December 5, 2019	Malignant hyperthermia.
November 8, 2019	Malignant hyperthermia.
September 13, 2019	Malignant hyperthermia.
May 16, 2019	Malignant hyperthermia.
April 4, 2019	Intravenous anesthetics.

### **Lectures to UNC Department of Anesthesiology Residents**

April 25, 2023	Anesthetic Management of Neurologic Emergencies
April 12, 2023	Practice Management. What's Happening in the Marketplace and Why It Matters for Anesthesiologists.
March 4, 2022	Should I Do An Anesthesia Fellowship?
March 4, 2022	Know Your Worth. Understanding Your Salary
August 4, 2022	Physics of Ultrasound Explained Through Imaging Artifacts.
July 14, 2022	Neuromuscular Blocking Drugs – You Must Reverse!
May 31, 2022	Neuromuscular Blocking Drugs: Anesthesia's Most Dangerous Drugs.
April 13, 2022	Practice Management: Review of Revenue.
July 15, 2021	Neuromuscular Blockade. Agents and antidotes.
June 17, 2021	Muscle Relaxants and Reversal Agents. Practical and Technical Information for the OR and Boards.
May 22, 2021	Choosing an anesthesia practice.
April 20, 2021	CNS disorders.
April 14, 2021	Operations Management. Small Group Facilitator.
July 20, 2020	Neuromuscular Blocking Drugs.
March 17, 2020	Ethics and Practice Management.
March 28, 2020	Anesthesia billing systems.
October 16, 2019	Current Trends in the Healthcare Marketplace and Implications for Anesthesiologists.
July 12, 2019	Neuromuscular Blocking Drugs.

### **Grand Rounds and Related Lectures at University of North Carolina**

October 20, 2022	Soltes J, Flynn DN, and Ossman P. <i>Try a different tack. A journey into mortality improvement.</i> UNC Quality Expo 2022.
June 4, 2021	<i>UNC Medical Center Mortality Review Process.</i> Presentation to UNC Health Chief Medical Officers and Senior Quality Leaders.
March 5, 2021	<i>US News Rankings.</i> Neurology and Neurosciences Quality Council.
February 3, 2021	<i>State of Quality, UNC Medical Center.</i> Department of Surgery Grand Rounds.
March 4, 2020	<i>Value based care. Seeing 2020 and beyond.</i> UNC Department of Anesthesiology Grand Rounds.

### **Visiting Professor/Grand Rounds – Outside of North Carolina**

October 26, 2020	<i>Value-based perioperative care. Principles and strategies for success.</i> Mayo Clinic Florida Department of Anesthesiology Grand Rounds. Jacksonville, FL.
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### **Mortality and Morbidity Presentations, UNC Department of Anesthesiology**

August 24, 2022	Tripi J and Flynn DN. <i>Challenges obtaining emergency release blood during a surgical emergency.</i>
August 24, 2022	McNeil-Masuka M and Flynn DN. <i>Respiratory arrest after substernal thyroid surgery.</i>

August 22, 2022 Clemmons E and **Flynn DN**. *Case cancellation after induction of anesthesia.*

### **Continuing Education Lectures**

June 16, 2022 *Value-based insurance contracts. Impact on anesthesia providers and how we should alter our practice in a value-based world.* Carolina Refresher Course 2020, Update in Anesthesiology, Pain, and Critical Care Medicine. Kiawah Island, SC.

June 14, 2022 *Patient satisfaction in outpatient surgery. How it's measured, why it matters, and what you can do about it.* Carolina Refresher Course 2020, Update in Anesthesiology, Pain, and Critical Care Medicine. Kiawah Island, SC.

June 17, 2020 *Value-based insurance contracts. Impact on anesthesia providers and how we should alter our practice in a value-based world.* Carolina Refresher Course 2020, Update in Anesthesiology, Pain, and Critical Care Medicine. Kiawah Island, SC. (Cancelled due to COVID-19)

June 15, 2020 *Patient satisfaction in outpatient surgery. How it's measured, why it matters, and what you can do about it.* Carolina Refresher Course 2020, Update in Anesthesiology, Pain, and Critical Care Medicine. Kiawah Island, SC. Scheduled 06/17/2020. (Cancelled due to COVID-19)

### **Continuing Education Workshop Instruction**

June 15, 2022 *Point of Care Ultrasound Workshop: Lung, gastric, and abdominal scanning in live models.* Carolina Refresher Course 2022, Update in Anesthesiology, Pain, and Critical Care Medicine. Kiawah Island, SC.

June 14, 2022 *Point of Care Ultrasound Workshop: Cardiac parasternal, apical, and subcostal windows.* Carolina Refresher Course 2022, Update in Anesthesiology, Pain, and Critical Care Medicine. Kiawah Island, SC.

June 13, 2022 *Point of Care Ultrasound Workshop: Cardiac parasternal, apical, and subcostal windows.* Carolina Refresher Course 2022, Update in Anesthesiology, Pain, and Critical Care Medicine. Kiawah Island, SC.

### **Resident & Medical Student Teaching/Mentorship:**

#### **Clinician Leadership in Quality and Safety Scholarly Concentration: Medical Student Mentor**

2022- 2023  
Reduction of Environmental Impact of Anesthetics at UNC Medical Center  
Medical student: John Hipp  
Co-mentor: Dr. Lindsey Gouker

#### **Team Based Quality Improvement Project: Faculty Mentor**

2019- 2020  
Improvement of ASA Physical Status Score Selection  
Residents: Allred A, Leopold R, McNulty L, Greenberg M.  
Co-mentor: Dr. Meena Bhatia

### **Academic Medicine Rotation Quality Improvement Projects**

- 2021 Application of LEAN Management Principles to the Obstetric Operating Rooms  
Resident: Khadija Razzaq  
Co-mentors: Drs. Lacey Straube and Kathleen Smith
- 2020 ASA Classification for Patients with CAD. Are We All On the Same Page?  
Resident: Jennifer Trippi  
Co-mentor: Dr. Allan Smeltz
- 2020 Use of ASA Physical Status Reference Cards to Improve Reimbursement for Anesthesia Services  
Resident: Damon Wallace  
Co-mentor: Dr. Elisa Lund
- 2019 Assessment of Pharmacy Costs During CABG at UNC-Medical Center.  
Resident: Jacob Schaffer  
Co-mentor: Dr. Lavinia Kolarczyk

**Medical Student Research Projects (unpublished)**

- 2020 Improvement of Preoperative Risk Assessment Documentation in Elective Colorectal Surgery  
Student: BT Parker  
Co-mentor (primary): Dr. Jin Ra

**UNC Department of Anesthesiology Resident Mentorship**

- 2022 Mentees: Yuxiao Qian, Michael Greenberg  
2021 Mentee: Michael Greenberg  
2019-2020 Mentee: Patrick Steele  
2019 Mentee: Bryna Capsheaw

**Other Teaching Activities, Department of Anesthesiology, University of North Carolina**

- November 24, 2021 Anesthesiology Mock Oral Board Examiner  
May 19, 2021 Anesthesiology Mock Oral Board Examiner  
May 2021 Anesthesiology Observed Structured Clinical Examination (OSCE) grader.  
November 11, 2020 Anesthesiology mock oral board examiner  
May 2, 2020 Anesthesiology mock oral board examiner  
November 2019 Anesthesiology Observed Structured Clinical Examination (OSCE) grader  
May 2, 2019 Anesthesiology mock oral board examiner

**Professional Service:**

**National:**

- 2022-present American Society for Regional Anesthesia & Pain Medicine (ASRA)  
CPT Advisory Committee, Alternate Advisor
- 2021-present American Society for Anesthesiologists (ASA)  
POCUS Mentor for Professional Certification  
Mentees: Dr. Alexander Doyal, Dr. Elisa Lund, Dr. Michael Greenberg

2021 Foundation for Anesthesia Education and Research (FAER)  
Swimming with the Sharks Competition – Business Plan Evaluator

**Hospital Committee Involvement:**

**UNC Health System, Chapel Hill, NC**

2021 System Mortality Review Committee (co-chair)  
2020-2024 Expected Morality Project Team  
2020-2024 Mortality Oversight Committee  
2020-2021 Pharmacy and Therapeutics, System Pain/Anesthesia Subcommittee

**UNC Medical Center, Chapel Hill, NC**

2020-2022 US News & World Report Strategy Team  
2020-2023 Mortality Review Committee  
2020-2024 Patient Safety Subcommittee  
2020-2024 Sepsis Planning Committee  
2020-2024 Failure to Rescue Committee  
2020-2024 Hospice and Palliative Care Collaborative  
2019-2024 Pharmacy and Therapeutics, Pain and Anesthesia Subcommittee

**Chatham Hospital, Siler City, NC**

2020-2021 Medical Staff Review Committee  
2020-2021 Surgery Committee  
2020-2021 Pharmacy and Therapeutics Committee  
2020-2021 Infection Control Committee  
2020-2021 Patient Safety and Clinical Quality Committee

**UNC Department of Anesthesiology, Chapel Hill, NC**

2021-2024 Academic Performance Assessment Committee  
2020-2021 Finance Committee (member, elected by peers)  
2020-2024 Patient Safety and Quality Improvement Committee  
2020 COVID-19 Operating Room Planning Leader  
2020 COVID-19 Anesthesia Supply Chain Response Leader

**Mission Health System, Asheville, NC**

2017-2018 System Pharmacy and Therapeutics Oversight Committee  
2017-2018 System Pain Management Steering Committee  
2017-2018 Central Line Associated Blood Stream Infection (CLABSI) Team  
2017-2018 System Quality Oversight Committee

**Volunteer Activities:**

2010-2011 Director of Marketing. Wharton Global Health Volunteers, University of Pennsylvania.  
2007-2008 Development Coordinator. United Community Clinics, University of Pennsylvania.  
2005 Co-founder: The Wisconsin Journal of Science (WISCI), University of Wisconsin–Madison

2004 Preclinical volunteer. Student Health and Wellness Centres Organization, Cape Town, South Africa.

2003-2005 Tutor (math and sciences). Greater University Tutoring Service, University of Wisconsin–Madison.

**Professional Societies:**

2022-present American Society for Regional Anesthesia and Pain Medicine

2019-present Healthcare Financial Management Association

2018-present National Association for Healthcare Quality

2016-present North Carolina Society of Anesthesiologists

2012-present American Society for Anesthesiologists