

## Christopher David Flanagan, M.D.

### LICENSURE:

Florida 10/24/2020 – 1/31/2023

### ACADEMIC AFFILIATIONS

5/2024 – present: Assistant Professor, Orthopaedic Surgery  
University of South Florida, Morsani College of Medicine

### HOSPITAL AFFILIATIONS

7/2021 – present: Tampa General Hospital, Tampa, FL

7/2021—present: Blake Medical Center, Bradenton, FL

7/2021—present: Lakeland Regional Hospital, Lakeland, FL

### EDUCATION

8/2021 – 7/2022 Florida Orthopaedic Institute, Orthopaedic Trauma Fellowship,  
Collaborative Faculty, Department of Orthopaedics and Sports  
Medicine, USF Morsani College of Medicine

7/2015 – 6/2021 Case Western Reserve University, Orthopaedic Surgery Residency

7/2011 – 6/2015 University of Chicago Pritzker School of Medicine, M.D.

8/2007 – 5/2011 Vanderbilt University, BA, Neuroscience, Mathematics, *cum laude*

### HONORS AND AWARDS

2021 The Carter-Makley Award Winner  
Presented annually to the Chief Resident whose excellence and  
emergence as a leader and mentor for junior residents distinguishes  
him among the Chief Residency class

2018 The Alvin Freehafer, M.D., Award Winner  
Presented annually to the second-year Orthopaedic resident who  
excels in clinical care and exhibits the highest level of  
professionalism with patients, peers, and staff

2017 First Place, Clinical Research, MetroHealth Research Day. Clinical  
Project.  
**Flanagan, C.**, Wysong, E., Ramey, J., Vallier, H. (2017) Factors  
predictive of inpatient and post-discharge opiate prescription  
consumption in an orthopaedic trauma population. MetroHealth  
Research Symposium. Cleveland, OH.

2015

Top Quartile – Graduating Class of 2015

RESEARCH GRANTS:

2022-2023

AO Trauma North America Fellows Research Grant  
Grant #171408-FEL2021

*“Prospective study of rates of peripheral artery disease in at-risk patients undergoing fixation for complex tibial plateau and tibial plafond fractures”*

2022-2023

OTA Fellows Research Grant  
Grant #6844

*“Prospective study of rates of peripheral artery disease in at-risk patients undergoing fixation for complex tibial plateau and tibial plafond fractures”*

2016-2017

Allen Research Fellowship. Department of Orthopaedics. Case Western Reserve University. Cleveland, OH, USA.

2012

NIDDK Training Grant. Department of Medicine, University of Chicago. Chicago, IL, USA.

## PUBLICATIONS

1. Mesa L, Lufrano RC, Sajid MI, **Flanagan CD**, Grewal IS, Bates P, Mir HR. Acute versus staged fixation of bicondylar tibial plateau fractures: a dual centre international study. *European Journal of Orthopaedic Surgery & Traumatology*. 2024 Feb 27:1-8.
2. **Flanagan, CD.**, Fairchild R, McCaskey M, Sajid MI, Watson D, Mir H. Union and displacement characteristics following percutaneous screw fixation of superior pubic rami fractures. *European Journal of Orthopaedic Surgery & Traumatology*. 2023 Sep 24:1-7.
3. Sinkler, M, Joseph, N, **Flanagan, CD**, Vallier, HA. Orthopaedic surgery residents report little subjective or objective familiarity with healthcare costs. *European Journal of Orthopaedic Surgery & Traumatology*. 2023 May 17:1-7.
4. **Flanagan, CD.**, Vallier, HA. What's new in orthopaedic trauma. *Journal of Bone and Joint Surgery American*. 2023 May 16:10-2106.
5. Stenquist, DS, Albertson, S., Bailey, D., Paladino, L., **Flanagan, CD.**, et al. High Versus Low Energy Intertrochanteric Hip Fractures in Young Patients: Injury Characteristics and Factors Associated with Complications. *Journal of Orthopaedic Trauma*. *Journal of Orthopaedic Trauma*. 2023 May 1;37(5):222-9. DOI: 10.1097/BOT.0000000000002587.
6. **Flanagan CD**, Schmidt CM, Amin MJ, Andrews RC, Walson FT, Mir HR, Frankle MA. Academic productivity metrics correlate positively with industry funding amongst orthopedic shoulder and elbow surgeons. *JSES International*. 2023 Mar 21. DOI: 10.1016/j.jseint.2023.02.011
7. **Flanagan CD**, Lufrano RC, Mesa L, Watson D, Shah AR, Maxson BJ, Infante A, Donohue D, Downes K, Sanders RW, Mir HR. Outcomes following acute versus staged fixation of complete articular tibial plafond fractures. *Journal of Orthopaedic Trauma*. 2023 Jan 12. DOI: 10.1097/bot.0000000000002572 PMID: 36728242
8. **Flanagan CD**, Walson FT, Dolorit M, Schmidt CM, Frankle MA, Mir HR. Academic productivity in Orthopaedic Traumatology correlates positively with industry compensation. *Journal of Orthopaedic Trauma*. 2022 Mar 17:10-97. DOI: 10.1097/BOT.0000000000002563
9. **Flanagan, CD.**, Walson, ST., Schmidt, CM., Frankle, MA., Mir, HR. The Association Between Orthopaedic Surgeon Academic Productivity Metrics and Compensation from Medical Industry. *Journal of the American Academy of Orthopaedic Surgeons*. October 14, 2022. DOI: 10.5435/JAAOS-D-22-00453
10. **Flanagan, CD.**, Soloman, E., Michalski, J., Stang, TS., Stenquist, DS., Donohue, D., Shah, A., Maxson, B., Watson, D., Ochenjele, G., Sanders, RW., Mir, HR. Does a reduced secondary operation rate offset higher implant charges when utilizing suture button fixation for syndesmotic injuries? *Journal of Orthopaedic Trauma*. August 18, 2022. DOI: 10.1097/BOT.0000000000002476.

11. **Flanagan CD**, Cannada LK. Results of a Nationwide Practice Survey of Orthopaedic Traumatologists. *Journal of Orthopaedic Trauma*. 2022 Nov 1;36(11):e431-6. DOI: 10.1097/BOT.0000000000002419
12. **Flanagan CD.**, Joseph NM, Copp J, Romeo N, Alfonso N, Hirschfeld A. Weight-bearing status may influence rates of radiographic healing following reamed, intramedullary fixation of diaphyseal femur fractures. *OTA International*. 2021 Dec;4(4). DOI: 10.1097/OI9.0000000000000154
13. Joseph, NM., Benedick, A., **Flanagan, CD.**, Breslin, M., Vallier, HA. Risk factors for post-traumatic stress disorder in acute trauma patients. *Journal of Orthopaedic Trauma*. *Journal of Orthopaedic Trauma*. 2021 Mar 15. DOI: 10.1097/BOT.0000000000001990
14. Joseph, NM., **Flanagan, CD.**, Heimke, IM., Cho, E., Pothireddy, S., Scarcella, N., Vallier, HA. Factors influencing functional outcomes following operative fixation of acetabular fractures. *Injury*. 2020. Nov 16. DOI: 10.1016/j.injury.2020.11.027
15. **Flanagan, CD.**, Tamer, P., Cooperman, DR., Crisco, JJ., Ladd, AL., Liu, RW. An anatomic evaluation of the trapezium and its relationship to basilar joint osteophytic change. *Hand*. 2020 Sep 16. DOI: 1558944720946490.
16. Scollan, JP., Bertsch, ML., **Flanagan, CD.**, Chughtai, M., Bafus, BT. Acute Compartment Syndrome of the Deltoid: A Case Report and Systematic Review of the Literature. *JSES International*. 2020. Sept 7. DOI: <https://doi.org/10.1016/j.jseint.2020.07.016>
17. **Flanagan CD**, Joseph NM, Benedick A, Vallier HA. Five-year trends in opioid prescribing following orthopaedic trauma. *JAAOS Global Research & Reviews*. 2020 Aug 1;4(8):e20. DOI: 10.5435/JAAOSGlobal-D-20-00134
18. Joseph, NM., Benedick, A., **Flanagan, CD.**, Simpson, M., Kalina, M., Hendrickson, S., Breslin, M., Vallier, HA. Prevalence of post-traumatic stress disorder in acute trauma patients. *Orthopaedic Trauma Association International*. 2020 Mar 3;(1). DOI: 10.1097/OI9.0000000000000056
19. Du, J., **Flanagan, CD.**, Bensusan, J., Knusel, K., Akkus, O., Rinnac, C. Raman Biomarkers are Associated with Cyclic Fatigue Life of Human Allograft Cortical Bone. *Journal of Bone and Joint Surgery America*. 2019 Sept; 101(17):85. DOI: 10.2106/JBJS.18.00832.
20. Rascoe, AS., **Flanagan, CD.**, Kim, C., Vallier, HA. Variations in revenue generation for the care of orthopaedic trauma patients. *JAAOS-Journal of the American Academy of Orthopaedic Surgeons*. 2019 Jun 17. DOI: 10.5435/JAAOS-D-17-00871
21. **Flanagan, CD.**, Rascoe, AS., Wang, D., Vallier, HA. The trauma service line: Revenue from subsequent injury and non-injury related care. *Journal of Orthopaedic Trauma*. 2019 Apr. DOI: 10.1097/BOT.0000000000001501

22. Morrison, TA., **Flanagan, CD.**, Ivanov, S., Wera, GD. Appropriate Use Criteria for the Nonarthroplasty Treatment of Knee Osteoarthritis in Veterans. *Federal Practitioner*. 2019 Mar;36(3):116. PMID: 30983851.
23. **Flanagan CD**, Wysong-Fuell, E, Ramey, JS,, Vallier, HA. Understanding the opioid epidemic: Factors predictive of in-patient and post-discharge prescription opioid use in an orthopaedic trauma population. *Journal of Orthopaedic Trauma*. 2018 Oct 1;32(10):e408-14. DOI: 10.1097/BOT.0000000000001256.
24. **Flanagan CD.**, Wysong-Fuell, E, Ramey, JS,, Vallier, HA. Healthcare providers likely under-detect the prevalence of substance use in orthopaedic trauma patients. *Case Orthopaedic Journal*. September 2018.
25. **Flanagan, CD**, Rascoe, AS, Wang, DM, Vallier, HA. Revenue for initial orthopaedic trauma care: effect of patient and injury characteristics. *Journal of Orthopaedic Trauma*. 2018 Sep 1;32(9):433-8. DOI: 10.1097/BOT.0000000000001192.
26. **Flanagan CD**, Childs BR, Moore TA, Vallier HA. Early Tracheostomy in Patients with Traumatic Cervical Spinal Cord Injury Appears Safe and May Improve Outcomes. *Spine*. 2018 Aug 1;43(16):1110-6. DOI: 10.1097/BRS.0000000000002537.
27. **Flanagan CD.**, Wysong-Fuell, E, Ramey, JS, Gunasekar, A, Vallier, HA. Traumatic orthopaedic injury is not an independent risk factor for high post-discharge opioid consumption. *Journal of the American Academy of Orthopaedic Surgery Global Research and Reviews*. 2017; 00e 58. doi: 10.5435/JAAOSGlobal-D-17-00058
28. **Flanagan, CD.**, Unal M, Akkus O, Rimnac CM. Raman spectral markers of collagen denaturation and hydration in human cortical bone tissue are affected by radiation sterilization and high cycle fatigue damage. *Journal of the Mechanical Behavior of Biomedical Materials*. 2017 Jul 13. DOI: <https://doi.org/10.1016/j.jmbbm.2017.07.016>
29. Zhou C, Huang Z, Ding L, Deel ME, Arain FM, Murray CR, Patel RS, **Flanagan CD**, Gallagher MJ. Altered cortical GABAA receptor composition, physiology, and endocytosis in a mouse model of a human genetic absence epilepsy syndrome. *Journal of Biological Chemistry*, July 2013, 21458-21472. DOI 10.1074/jbc.M112.444372.

## BOOK CHAPTERS

1. **Flanagan, CD.,** Mir, HR., Miller, AN. Perioperative pain management of fractures. Rockwood and Green's Fractures in Adults. Tenth Edition. Wolters Kluwer. 2023.
2. **Flanagan, CD.,** Mir, HR., Sanders, RW. Calcaneus fractures. Rockwood and Green's Fractures in Adults. Tenth Edition. Wolters Kluwer. 2023.
3. **Flanagan, CD.,** Mir, HR., Sanders, RW. Tibial pilon fractures. Rockwood and Green's Fractures in Adults. Tenth Edition. Wolters Kluwer. 2023.
4. **Flanagan, CD.,** Mir, HR. Atypical Femoral Fractures. Arthroplasty for the Treatment of Fractures in the Older Patient - Indications and Current Techniques. Second edition. Springer Publishing. 2022
5. **Flanagan, CD.,** Mir, HR. Management of Osteoporotic Related Fractures. Arthroplasty for the Treatment of Fractures in the Older Patient - Indications and Current Techniques. Second edition. Springer Publishing. 2022
6. **Flanagan, CD.,** Vallier, HA. Oxford Textbook of Trauma and Orthopaedics. 12.60 Fractures of the talus and peritalar dislocations. 2021.
7. **Flanagan, CD.,** Vallier, HA. Fractures: The polytraumatized patient. Musculoskeletal disorders. Springer Publishing. 2018.

## PODIUM PRESENTATION:

1. **Flanagan CD**, Walson FT, Dolorit M, Schmidt CM, Frankle MA, Mir HR. Academic productivity in Orthopaedic Traumatology correlates positively with industry compensation. 2023 AOA Annual Leadership Conference. Salt Lake City, UT, June 15, 2023.
2. Talus fracture study group. Risk factors for avascular necrosis following talus fractures. American Academy of Orthopaedic Surgery Annual Meeting. Chicago, IL. March 25, 2022.
3. **Flanagan, CD.**, Joseph, NM., Copp, J., Romeo, N., Alfonso, N., Hirschfeld, A. Weight-bearing status may influence rates of radiographic healing following reamed, intramedullary fixation of diaphyseal femur fractures. Cleveland Orthopaedic Society. Cleveland, OH. April 17, 2021.
4. **Flanagan, CD.**, Joseph, NM., Heimke, IM, Cho, E., Pothireddy, S., Scarcella, N., Vallier, HA. Heterotopic ossification is associated with worse functional outcomes following operative fixation of acetabular fractures. American Academy of Orthopaedic Surgeons Annual Meeting. Accepted. September 2021.
5. Talus fracture study group. Risk factors for avascular necrosis following talus fractures. Orthopaedic Trauma Association Annual Meeting. October 2020.
6. Joseph, NM., Benedick, A., **Flanagan, CD.**, Simpson, M., Kalina, M., Hendrickson, S., Breslin, M., Vallier, HA. Prevalence of post-traumatic stress disorder in acute trauma patients. American Academy of Orthopaedic Surgeons Annual Meeting. Orlando, Florida. March 2020.
7. Du, J., **Flanagan, CD.**, Bensusan, J., Knusel, K., Rimnac, C.. Raman biomarkers predict cyclic fatigue life of human allograft cortical bone. American Academy of Orthopaedic Surgeons Annual Meeting. Las Vegas, NV. March 12, 2019.
8. **Flanagan, CD.**, Tamer, P., Cooperman, D., Crisco, J., Ladd, A., Liu, R. An osteological evaluation of the trapezium and its relationship to basilar joint arthritis. 3<sup>rd</sup> International Thumb Osteoarthritis Workshop. Palo Alto, CA. November 8-9, 2018
9. Du, J., **Flanagan, CD.**, Bensusan, J., Knusel, K., Akkus, O., Rimanc, C. Raman biomarkers predict cyclic fatigue life of human allograft cortical bone. Summer Meeting of the Hip Society. New York, NY. October 5, 2018.
10. Morrison, T., **Flanagan, CD.**, Ivanov, S., Wera, G. Evaluation of the American Academy of Orthopaedic Surgeons appropriate use criteria for non-arthroplasty treatment of knee osteoarthritis. AAOS Annual Meeting—Veterans Affairs Subsection. New Orleans, LA. March 10, 2018.
11. **Flanagan, CD.**, Wysong, E., Ramey, J., Vallier, H. Factors predictive of inpatient and post-discharge opiate prescription consumption in an orthopaedic trauma population. Cleveland Orthopaedic Society. Cleveland, OH. January 2018.



12. **Flanagan, CD.**, Wysong, E., Ramey, J., Vallier, H. Factors predictive of inpatient and post-discharge opiate prescription consumption in an orthopaedic trauma population. MetroHealth Research Symposium. Cleveland, OH. October 2017.
13. **Flanagan CD**, Unal M, Akkus O, Rinnac CM. Raman spectral markers of collagen denaturation and hydration in human cortical bone tissue are affected by radiation sterilization and high cycle fatigue damage. Victor M. Goldberg Memorial Lecture Series. Cleveland, OH, USA. October 24, 2017.

## POSTER PRESENTATIONS:

1. **Flanagan, CD.**, Walson, ST., Schmidt, CM., Frankle, MA., Mir, HR. The Association Between Orthopaedic Surgeon Academic Productivity Metrics and Compensation from Medical Industry. American Orthopaedic Association Annual Meeting. June 2023.
2. **Flanagan, CD.**, Cannada, LK. Results of a nationwide practice survey of orthopaedic Traumatologists. Orthopaedic Trauma Association Annual Meeting. October 2022.
3. Joseph, NM., **Flanagan, CD.**, Heimke, IM., Pothireddy, S., Scarcella, N., Breslin, M., Vallier, HA. Risk factors for poor functional outcomes in acetabular fractures. Orthopaedic Trauma Association Annual Meeting. October 2020.
4. **Flanagan, CD.**, Joseph, NM., Heimke, IM., Pothireddy, S., Scarcella, N., Vallier, HA. Prevention of heterotopic ossification may enhance functional outcomes following fixation of acetabular fractures. Orthopaedic Trauma Association Annual Meeting. October 2020.
5. **Flanagan, CD.**, Joseph, NM., Copp, J., Romeo, N., Alfonso, N., Hirschfeld, AG. Non-weight bearing following intramedullary fixation of femoral diaphyseal fractures slows radiographic healing by 58% and may contribute to non-union risk. Orthopaedic Trauma Association Annual Meeting. October 2020.
6. Vallier, H., **Flanagan, CD.**, Joseph, N. Orthopaedic surgery residents report little subjective or objective familiarity with healthcare costs. American Orthopaedic Association. Baltimore, Maryland. June 2020.
7. Ina, J., Dumaine, A., **Flanagan, CD.**, Gilmore, A. Findings associated with non-accidental trauma workup in isolated femoral diaphyseal fractures. American Academy of Orthopaedic Surgeons Annual Meeting. Orlando, Florida. March 2020.
8. **Flanagan, CD.**, Joseph, N., Benedick, A., Vallier, H. A pilot study: Mental health support may reduce post-injury opioid use in orthopaedic trauma patients who screen positive for PTSD. Orthopaedic Trauma Association Annual Meeting. Sept 2019
9. Joseph, N., Benedick, A., Breslin, M., **Flanagan, CD.**, Simpson, M., Kalina, M., Gill, B., Hendrickson, S., Vallier, H. Prevalence of post-traumatic stress disorder in acute trauma patients. Orthopaedic Trauma Association Annual Meeting. Sept 2019
10. Du, J., **Flanagan, CD.**, Bensusan, J., Knusel, K., Akkus, O., Rimnac, C. Raman biomarkers predict cyclic fatigue life of human allograft cortical bone. Orthopaedic Research Society Annual Meeting. Austin, Texas. February 2019.
11. **Flanagan, CD.**, Rascoe, A., Wang, D., Vallier, H. Value of the trauma service line: Revenue related to injury and non-injury related care. American Academy of Orthopaedic Surgeons Annual Meeting. Las Vegas, NV. March 12, 2019
12. Du, J., Wang, B., **Flanagan, CD.**, Akkus, O., Rimnac, C. Prospective assessment of the effect of cyclic fatigue on Raman spectral biomarkers of bone tissue. International Combined Meeting of Orthopaedic Research Societies. June 19-22, 2019. Montreal, Quebec, Canada.

13. **Flanagan, CD.**, Smith, N., Berretta, S., Kraay, M., Lewandowski, J., Ghita, O., Rinnac, C. Pilot Study of Additively Manufactured PEEK-HA: In Vivo Biologic and In Vitro Fracture Properties. Orthopaedic Research Society. New Orleans, LA. 2018
14. **Flanagan, CD.**, Wysong, E., Ramey, J., Vallier, H. Factors predictive of inpatient and post-discharge opiate prescription consumption in an orthopaedic trauma population. MetroHealth Research Symposium. Cleveland, OH. 2017
15. **Flanagan, CD.**, Qian, J., Unal, M., Akkus, O., Rinnac, C. Raman spectral markers of collagen hydration and denaturation in bone are affected by radiation sterilization and high cycle fatigue damage. Research ShowCase, Case Western Reserve University, Cleveland, OH. 2017.
16. **Flanagan, CD.**, Qian, J., Unal, M., Akkus, O., Rinnac, C. Raman spectral markers of collagen hydration and denaturation in bone are affected by radiation sterilization and high cycle fatigue damage. Engineering Week, Case Western Reserve University, Cleveland, OH. 2017
17. **Flanagan, CD.**, Wysong, E., Ramey, J., Vallier, H. Factors predictive of inpatient and post-discharge opiate prescription consumption in an orthopaedic trauma population. Orthopaedic Trauma Association. Vancouver, BC. 2017.
18. **Flanagan, CD.**, Hong, Z., Archer, S.L. Deficient DRP1-mediated mitochondrial fission in human ductus arteriosus smooth muscle cells in patent ductus arteriosus. Pritzker School of Medicine Summer Research Program; Chicago IL. 2013
19. Steffner, R., **Flanagan, CD.**, Haydon, R. Unplanned excision of high-grade subcutaneous sarcomas: who needs adjuvant radiation after re-excision. Musculoskeletal Tumor Society; San Francisco CA. 2013.

MEMBERSHIPS:

2020—Present Orthopaedic Trauma Association

2020—Present AO Trauma North America

LECTURES:

October 2022 Grand Rounds—The Mangled Extremity, Blake Medical Center

October 2022 Faculty—OTA Resident Fracture Course, Pelvis and Acetabulum Module

June 2020 Extensor tendon injuries. MetroHealth Orthopaedic Grand Rounds.

May 2019 Femoral neck fractures. MetroHealth Orthopaedic Grand Rounds.

August 2017 Post-traumatic osteomyelitis. MetroHealth Orthopaedic Grand Rounds.

March 2016 Biology of bone graft and bone graft substitutes. MetroHealth Orthopaedic Grand Rounds.

COURSES:

March 2018 AOTrauma Course –Basic Principles of Fracture Management. Kansas City, MO.

October 2016 AOTrauma Course—Principles of Intra-Operative Imaging. Cleveland, OH.

COMMITTEES

2020 – 2022 OTA Practice Management Committee, Resident Member

2018 – 2021 Orthopaedic Program Resident Education Committee, Case Orthopaedics

LICENSING EXAMS

2021 ABOS Part 1 N/A — Pass

2019 Step 3: 257 — Pass

2014 Step 2 CK: 272 — Pass

2014 Step 2 CS: N/A — Pass

2013 Step 1: 256 — Pass