

# Chris A. Anthony, MD

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563.343.1951

## Professional Experience

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### **University of Iowa Orthopedics and Rehabilitation, Resident Physician (2014-Current)**

Currently 4th year orthopedic surgery resident physician. Elected to Alpha Omega Alpha (AOA) honor society as resident (2017).

### **New York University Interactive Telecommunications Program, Adjunct Professor (2016-Current)**

Teaching coursework relative to design and software communication in healthcare contexts. See *Courses Taught* (p. 13).

### **University of Iowa Healthcare Signal Center, Innovation Fellow (August 2016-Current)**

First fellow for the Signal Center. Responsibilities include new project design and execution.  
<http://www.thesignalcenter.com>

### **New York Dragons (Arena Football League), Professional Athlete (2003-2009)**

Starter for 6 seasons at wide receiver for the New York Dragons of the Arena Football League

### **Arena Football League Players Association (AFLPA), Vice President (2008-2010)**

Elected Vice-President of AFLPA (2008-2010)

## Education

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### **University of Iowa; Carver College of Medicine, MD (2010-2014)**

Graduated from the Research Distinction Track focusing on orthopedic and medical software research

### **New York University; Interactive Telecommunications Program (ITP), MPS candidate (2009)**

Studied interaction design, robotics, and sensor design and construction

### **Columbia University & Hunter College; Post-baccalaureate pre-medical curriculum (2007-2009)**

### **National Outdoor Leadership School (NOLS); EMT-B (2005)**

Earned certification as Emergency Medical Technician-Basic and Wilderness First Responder

### **Iowa State University; BA Political Science (2001)**

## Honors and Awards

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### **Alpha Omega Alpha Honor Society (2017)**

*Elected by medical students at the University of Iowa*

### **Edward D. Henderson, M.D. Physician in Training Award (MAOA 2017)**

*What Does Conservative Management of Knee Osteoarthritis Cost During the Year Prior to TKA?*  
Bedard NA, Dowdle SB, **Anthony CA**, DeMik DE, McHugh MA, Bozic KJ, Callaghan JJ

**American Association of Hip and Knee Surgeon Clinical Research Award (2016)**

*What Are the Costs of Knee Osteoarthritis in the Year Prior to Total Knee Arthroplasty?*

Bedard NA, Dowdle SB, **Anthony CA**, DeMik DE, McHugh MA, Bozic KJ, Callaghan JJ

**Vice president; Arena Football League Players Association (2008-2010)**

*Elected by league wide team union representatives to serve as vice president of the player's union*

**Union representative, New York Dragons; Arena Football League Players Association (2007-2008)**

*Elected by teammates to serve as team representative to the player's union*

**Al Lucas Hero Team; Arena Football League (2007)**

*Honored by media and team organizations as having made outstanding contribution to the player's community*

**Ironman of the Game/Week; Arena Football League (2003-2008)**

*Multiple time nominee and recipient*

**Ironman of the Year, New York Dragons; Arena Football League (2003)**

*Voted best combined offensive/defensive player of the year by coaches and teammates*

**Most Valuable Player, Quad City Steamwheelers; Arena Football League 2 (2002)**

*Voted most valuable player by coaches and teammates*

**Reuben J. Miller Award; Iowa State Football (2000)**

*"Player whose conduct on and off the field of play stamps him as having made the greatest contribution to ISU football for the year"*

**Co-captain; Iowa State Football (1999, 2000)**

*Voted team captain for 1999 and 2000 seasons by ISU teammates*

**All-Big 12 wide receiver; Iowa State Football (Honorable Mention 1998, 2000)**

**Academic All-Big 12; Iowa State Football (Honorable Mention 1998, 2000)**

**Preseason 2<sup>nd</sup> Team All-Big 12 wide receiver; *The Sporting News* (2000)**

**Iowa State University Academic Achievement Award (1999)**

**Big 12 Commissioner's Honor Roll (1998)**

**Iowa State University Athletic Council Academic Honoree (1998)**

**Iowa State University full athletic scholarship (1998-2001)**

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## **Grants**

1. Iowa Orthopedic Society Research Grant; Title: *Postoperative Care via Smartphone Following Carpal Tunnel Release*. June 2017. Co-Principle Investigator; Amount: \$5,000

2. Orthopedic Trauma Association (OTA) Resident Grant; Title: *Opioid Utilization after Rotational Ankle Fractures: A Prospective Interventional Study Utilizing Mobile Phones and Software Communication*. Jan 2017. Co-Principle Investigator; Amount: \$20,000
  
3. Sarcoma Multidisciplinary Oncology Group; Title: *Symptom Tracker: Assessment of Symptoms, Pain, and Narcotic Usage in Patients with Sarcoma Utilizing Automated Mobile Phone Text Messaging*. May 2016. Co-Principle Investigator; Amount: \$16,000
  
4. UIHC Graduate Medical Education Innovation Fund; Title: *Assessment of Postoperative Pain and Narcotic Usage by Automated Mobile Phone Text Messaging*. Jan 2016. Co-Principle Investigator; Amount: \$7,500
  
5. American Foundation for Surgery of the Hand; Title: *A Technology Platform for Surgical Video Coaching in Orthopaedic Training*. Sep 2015. Principle Investigator; Amount: \$10,000
  
6. Orthopaedic Medical Grants Association (OMEGA) Title: *Use of Intraoperative Video Capture as a Method of Surgical Skills Assessment*. July 2014. Co-Principle Investigator; Amount: \$6,000
  
7. University of Iowa Carver College of Medicine Summer Research Grant: *Use of Computer Assisted Navigation in ACL Surgery and Biomechanics Research*. July 2011. Amount: \$4,200

## Peer Reviewed Publications

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1. **Anthony CA**, Duchman K, McDermott S, McCunniff P, Wolf BR, Bollier M, Thedens D, Albright JP. Double-Bundle ACL Reconstruction: Novice Surgeons Utilizing Computer-Assisted Navigation versus Experienced Surgeons. *Computer Aided Surgery*. 2013;18(5-6):172-80.
  
2. McDermott S, **Anthony CA**, Duchman K, McCunniff P, Albright JP. A clinical and radiographic approach for establishing proper tibial tubercle transfer when using quad active femoral nerve stimulation. *The Iowa Orthopaedic Journal*. 2013;33:84-89.
  
3. McCunniff P, **Anthony CA**, McDermott S, Albright JP. Arthroscopic Validation of the Clinical Exam for the Detection of the Symptomatic Synovial-Plical Complex by Relief from Surgical Excision. *The Iowa Orthopaedic Journal*. 2013;33:78-83.

4. **Anthony CA**, Peterson AR. Utilization of a Text-Messaging Robot to Assess Intraday Variation in Concussion Symptom Severity Scores. *Clin J Sport Med*. 2015 Mar;25(2):149-52.
5. **Anthony CA**, Polgreen LA, Chounramany J, Foster ED, Goerdts CJ, Miller ML, Suneja M, Segre AM, Carter BL, Polgreen PM. Outpatient blood pressure monitoring using bi-directional text messaging. *J Am Soc Hypertens*. 2015 May;9(5):375-81.
6. Byrn JC, Hrabec JE, Armstrong JG, **Anthony CA**, Charlton ME. Single-incision robotic colectomy: are costs prohibitive? *Int J Med Robot*. 2016 Jun;12(2):303-8.
7. **Anthony CA**, Westermann RW, Gao Y, Pugely AJ, Wolf BR, Hettrich CM. What Are Risk Factors for 30-day Morbidity and Transfusion in Total Shoulder Arthroplasty? A Review of 1922 Cases. *Clin Orthop Relat Res*. 2015 Jun;473(6):2099-105.
8. Crebs DT, **Anthony CA**, McCunniff PT, Nieto MJ, Beckert MW, Albright JP. Effectiveness of Fulkerson Osteotomy with Femoral Nerve Stimulation for Patients with Severe Trochlea Dysplasia. *The Iowa Orthopaedic Journal*. 2015;35:34-41.
9. **Anthony CA**, Wolf BR. Dysplasia Epiphysealis Hemimelica Treated With Osteochondral Allograft: A Case Report. *The Iowa Orthopaedic Journal*. 2015;35:42-8.
10. **Anthony CA**, Pugely AJ, Gao Y, Westermann RW, Martin CT, Wolf BR, Amendola A. Complications and Risk Factors for Morbidity in Elective Hip Arthroscopy: A Review of 1325 Cases. *Am J Orthop (Belle Mead NJ)*. 2017 Jan/Feb;46(1):E1-E9.
11. Westermann RW, **Anthony CA**, Duchman KR, Pugely AJ, Gao Y, Hettrich CM. Incidence, Causes and Predictors of 30-day Readmission after Shoulder Arthroplasty. *Iowa Orthop J*. 2016;36:70-4.
12. Karam MD, Thomas GW, Taylor L, Liu X, **Anthony CA**, Anderson DD. Value Added: the Case for Point-of-View Camera use in Orthopedic Surgical Education. *Iowa Orthop J*. 2016;36:7-12.
13. Westermann RW, **Anthony CA**, Duchman KR, Gao Y, Pugely AJ, Hettrich CM, Amendola A, Wolf BR. Infection following Anterior Cruciate Ligament Reconstruction: An Analysis of 6,389 Cases. *J Knee Surg*. 2016 Oct 25. [Epub ahead of print]
14. Phruetthiphath O, Gao Y, **Anthony CA**, Warth L, Pugely AJ, Liu S, Callaghan JJ. Incidence of and Preoperative Risk Factors for Surgical Delay in Primary Total Hip Arthroplasty: Analysis from the ACS-NSQIP. *J Arthroplasty*. 2016 Nov;31(11):2432-2436.
15. **Anthony CA**, Glass N, Hancock K, Bollier M, Wolf BR, Hettrich CM. Performance of PROMIS in Patients with Shoulder Instability. *American Journal of Sports Medicine*. *Am J Sports Med*. 2017 Feb;45(2):449-453.

16. Gholson JJ, Pugely AJ, Bedard NA, Duchman KR, **Anthony CA**, Callaghan JJ. Can We Predict Discharge Status After Total Joint Arthroplasty? A Calculator to Predict Home Discharge. *J Arthroplasty*. 2016 Aug 25. pii: S0883-5403(16)30509-5.
17. **Anthony CA**, Lawler EA, McDonald K, Glass NA, Shah A. Delivery of Patient Reported Outcome Instruments by Automated Mobile Phone Text Messaging. *HAND (NY)*. 2016 Oct 7. DOI: 10.1177/1558944716672201. [Epub ahead of print]
18. Bedard NA, Dowdle SB, **Anthony CA**, DeMik DE, McHugh MA, Bozic KJ, Callaghan JJ. The AAHKS Clinical Research Award: What Are the Costs of Knee Osteoarthritis in the Year Prior to Total Knee Arthroplasty? *J Arthroplasty*. 2017 Jan 18. pii: S0883-5403(17)30013-X.
19. Hanley JM, **Anthony CA**, DeMik D, Glass N, Amendola A, Wolf BR, Bollier M. Patient Reported Outcomes after Multi-Ligament Knee Injury: MCL Repair versus Reconstruction. *Orthop J Sports Med*. 2017 Mar 15;5(3):2325967117694818. doi: 10.1177/2325967117694818. eCollection 2017 Mar.
20. Hancock KJ, Glass N, **Anthony CA**, Hettrich CM, Albright J, Amendola A, Wolf BR, Bollier M. Performance of PROMIS for Healthy Patients Undergoing Meniscal Surgery. *J Bone Joint Surg Am*. 2017 Jun 7;99(11):954-958. doi: 10.2106/JBJS.16.00848.
21. **Anthony CA**, Peterson RA, Polgreen LA, Sewell DK, Polgreen PM. The Seasonal Variability in Surgical Site Infections and the Association With Warmer Weather: A Population-Based Investigation. *Infect Control Hosp Epidemiol*. 2017 May 16:1-8. doi: 10.1017/ice.2017.84. [Epub ahead of print]
22. **Anthony CA**, Lawler EA, Ward CM, Lin IC, Shah AS. Use of an Automated Mobile Phone Messaging Robot in Postoperative Patient Monitoring. *Telemed J E Health*. 2017 Jun 16. DOI: 10.1089/tmj.2017.0055. [Epub ahead of print]
23. Westermann RW, **Anthony CA**, Bedard N, Glass N, Bollier M, Hettrich CM, Wolf BR. Opioid Consumption After Rotator Cuff Repair. *Arthroscopy*. 2017 May 29. pii: S0749-8063(17)30260-8.
24. Duchman KR, **Anthony CA**, Westermann RW, Pugely AJ, Gao Y, Hettrich CM. Total Shoulder Arthroplasty: Is Less Time in the Hospital Better? *Accepted*. *Iowa Orthopedic Journal* 2017.
25. **Anthony CA**, Glass N, Hancock K, Bollier M, Hettrich CM, Wolf BR. Preoperative Performance of the Patient-Reported Outcomes Measurement Information System in Patients With Rotator Cuff Pathology. *Accepted*. *Arthroscopy*.
26. Dowdle B, Glass N, **Anthony CA**, Hettrich CM. Use of PROMIS in Patients Undergoing Primary Total Shoulder Arthroplasty. *Accepted*. *Orthopedic Journal of Sports Medicine*.
27. **Anthony CA**, Westermann RW, Bedard N, Glass N, Bollier M, Hettrich CM, Wolf BR. Opioid Demand Before and After Anterior Cruciate Ligament Reconstruction. *Accepted*. *American Journal of Sports Medicine*.

28. Jepson M, Bonthius D, Pelzer D, **Anthony CA**, Marcussen B, Negaard M, Peterson AR. A Case Report: Glycopyrrolate for Treatment of Exercise-Induced Hyperhydrosis. *Accepted*. SAGE Open Medical Case Reports.
29. **Anthony CA**, Duchman KR, Bedard N, Gholson JJ, Gao Y, Pugely AJ, Callaghan JJ. Hip Fractures: Appropriate Timing to Operative Intervention. *Accepted*. Journal of Arthroplasty.
30. Hancock KJ, Glass N, **Anthony CA**, Wolf BR, Hettrich CM, Albright J, Bollier M, Amendola A. The Performance of PROMIS in Patients with Operatively Treated ACL Tears. *Submitted*. Journal of Knee Surgery, Sports Traumatology, Arthroscopy.
31. Goz V, **Anthony CA**, Trimble D, Pugely AJ, Lawrence B, Spina N, Brodke D, Spiker R. Software Based Postoperative Communication with Patients Undergoing Spine Surgery. *Submitted*. Global Spine Journal.
32. Polgreen L, Segre AM, Cremer JF, **Anthony CA**, Carr L, Evans N, Simmering J, Foster E, Polgreen P. The Effect of Automated Text Messaging and Goal Setting on Pedometer Adherence and Physical Activity in Patients with Diabetes. *Submitted*. Translational Behavioral Medicine.
33. Sittapiroj T, **Anthony CA**, Rungprai C, Gao Y, Barg A, Phisitkul P. Brake Reaction Time Following Ankle and Subtalar Arthroscopy: When Is It Safe to Return to Driving? *Submitted*. Arthroscopy.
34. **Anthony CA**, Volkmar A, Shah A, Willey M, Karam M, Marsh JL. Communication with Orthopaedic Trauma Patients via Automated Mobile Phone Messaging. *Submitted*. Journal of Orthopaedic Trauma.
35. Yehyaw SE, Lawler E, Glass N, **Anthony CA**, Shah AS. Comparative Efficacy of Triamcinolone vs. Dexamethasone Injection for Idiopathic Trigger Finger: A Randomized Controlled Trial. *Submitted*. Journal of Bone & Joint Surgery.

## Abstracts

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1. **Anthony CA**, McDermott S, McCunniff P, Albright JP. Quantitative Assessment of Knee Kinematics Utilizing a New Low Profile Pivot Shift Test. Bone Joint J 2013 vol. 95-B no SUPP 28 99.
2. **Anthony CA**, Duchman K, McDermott S, McCunniff P, Wolf BR, Bollier M, Thedens D, Albright JP. Double-Bundle ACL Reconstruction: Novice Surgeons Utilizing Computer-Assisted Navigation versus Experienced Surgeons. Bone Joint J 2013 vol. 95-B no. SUPP 28 98.
3. Peterson AR, **Anthony CA**, Sotak K, Smith S. Intraday Variation in SCAT2 Symptom Severity Scores. Clinical Journal of Sports Medicine. March 2013. 23(2): 130.

4. **Anthony CA**, Rungpari C, Sittapiroj T, Phisitkul P. Driving Reaction Time After Left Sided Foot and Ankle Procedures. *Foot and Ankle Orthopaedics*. 2016 Sep 12.  
DOI: <https://doi.org/10.1177/2473011416S00170>
5. Gholson JJ, Pugely AJ, Bedard NA, Duchman KR, **Anthony CA**, Callaghan JJ. Can We Predict Discharge Status After Total Joint Arthroplasty? A Calculator to Predict Home Discharge. *Journal of Arthroplasty*. 2016 Dec. Vol 31, No 12.
6. Westermann RW, **Anthony CA**, Bedard N, Glass NA, Bollier MJ, Hettrich CM, Wolf BR. Patient Factors Associated with Prolonged Opioid Use After Rotator Cuff Repair. *Journal of Shoulder and Elbow Surgery*. 2017 May. Volume 26, Issue 5. Pp e151.

## Presentations/Posters

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1. Wolf BR, **Anthony CA**, Westermann RW, Bedard NA, Glass N, Hettrich CM, Bollier MJ. Opioid Demand after ACL Reconstruction. Association of Bone and Joint Surgeons, Annual Meeting, Austin, TX, April 2017.
2. Wolf BR, **Anthony CA**, Westermann RW, Bedard NA, Glass N, Bollier MJ. Opioid Use in Sports Medicine. Herodicus Society Annual Meeting, Pebble Beach, CA, May 2017.
3. **Anthony CA**, Duchman K, Bedard N, Gholson J, Gao Y, Pugely A, Callaghan JJ. Hip Fractures: Appropriate Timing to Operative Intervention. *Poster*. American Orthopaedic Association Annual Meeting 2017.
4. Bedard NA, Dowdle SB, **Anthony CA**, DeMik DE, McHugh MA, Bozic KJ, Callaghan JJ. What are the Costs of Knee Osteoarthritis in the Year Prior to TKA? *Poster*. American Orthopaedic Association Annual Meeting 2017.
5. **Anthony CA**, Westermann RW, Bedard N, Glass N, Bollier M, Hettrich CM, Wolf BR. Opioid Demand After Anterior Cruciate Ligament Reconstruction. *Podium*. American Orthopaedic Society for Sports Medicine Annual Meeting 2017.
6. Bedard N, Dowdle S, **Anthony CA**, Demik D, McHugh M, Bozic K, Callaghan JJ. What are the Costs of Knee Osteoarthritis in the Year Prior to Total Knee Arthroplasty? *Podium*. American Academy of Orthopaedic Surgeons Annual Meeting 2017.
7. Dowdle S, Glass N, **Anthony CA**, Hettrich CM. Use of Patient-Reported Outcome Measurement Information System in Patients Undergoing Primary Total Shoulder Arthroplasty. *Podium*. American Academy of Orthopaedic Surgeons Annual Meeting 2017.

8. **Anthony CA**, Lawler E, Glass N, McDonald K, Shah A. Delivery of Patient Reported Outcome Instruments by Automated Mobile Phone Messaging. Podium. *Podium*. American Academy of Orthopaedic Surgeons Annual Meeting 2017.
9. **Anthony CA**, Goetz J, Schumer R, Phisitkul P, Femino J. Effect of Progressively Larger Lateral Column Lengthening Calcaneal Osteotomy on Radiographic Measurements of Foot Alignment. *Podium*. American Academy of Orthopaedic Surgeons Annual Meeting 2017.
10. **Anthony CA**, Westermann RW, Glass N, Bedard N, Bollier M, Hettrich C, Wolf B. What is Opioid Demand after Anterior Cruciate Ligament Reconstruction? *Poster*. American Academy of Orthopaedic Surgeons Annual Meeting 2017.
11. Westermann R, **Anthony CA**, Bedard N, Glass N, Hettrich C, Bollier M, Wolf B. The Natural History of Opioid Use and Patient Factors Associated with Prolonged Use Following Arthroscopic Rotator Cuff Repair. *Podium*. American Academy of Orthopaedic Surgeons Annual Meeting 2017.
12. **Anthony CA**, Duchman K, Bedard N, Gholson J, Gao Y, Pugely A, Callaghan JJ. Hip Fractures: Appropriate Timing to Operative Intervention. *Podium*. American Academy of Orthopaedic Surgeons Annual Meeting 2017.
13. Bedard NA, Dowdle BS, **Anthony CA**, DeMik D, McHugh M, Bozic KJ, Callaghan JJ. What Does Conservative Management of Knee Osteoarthritis Cost During the Year Prior to TKA? *Podium*. Mid-American Orthopaedic Association Annual Meeting 2017.
14. **Anthony CA**, Duchman K, Bedard N, Gholson J, Gao Y, Pugely A, Callaghan JJ. Hip Fractures: Appropriate Timing to Operative Intervention. *Poster*. Mid-American Orthopaedic Association Annual Meeting 2017.
15. **Anthony CA**, Bedard N, Duchman K, Gholson J, Gao Y, Pugely A, Callaghan JJ. Hip Fractures Treated with Total Hip Arthroplasty: Incidence and Risk Factors for Surgical Delay. *Poster*. Mid-American Orthopaedic Association Annual Meeting 2017.
16. **Anthony CA**, Westermann RW, Bedard N, Glass N, Hettrich CM, Bollier M, Wolf B. What is Opioid Demand After ACL Reconstruction? *Podium*. Mid-American Orthopaedic Association Annual Meeting 2017.
17. Westermann RW, **Anthony CA**, Bedard N, Glass N, Hettrich C, Bollier M, Wolf B. What are Patient Factors Associated with Prolonged Opioid Use After Rotator Cuff Repair? *Poster*. Mid-American Orthopaedic Association Annual Meeting 2017.
18. Hancock KJ, Glass N, **Anthony CA**, Hettrich CM, Albright J, Amendola A, Wolf BR, Bollier M. Performance of PROMIS in Healthy Patients Undergoing Meniscal Surgery. *Podium*. Mid-American Orthopaedic Association Annual Meeting 2017.
19. Dowdle B, Glass NA, **Anthony CA**, Hettrich CM. The Use of PROMIS in Patients Undergoing Primary Total Shoulder Arthroplasty. *Poster*. Mid-American Orthopaedic Association Annual Meeting 2017.



20. **Anthony CA**, Duchman K, Bedard N, Gholson J, Gao Y, Pugely A, Callaghan JJ. Hip Fractures Treated with Total Hip Arthroplasty: Incidence and Risk Factors for Surgical Delay. Orthopaedic Research Society Annual Meeting 2017.
21. **Anthony CA**, Duchman K, Bedard N, Gholson J, Gao Y, Pugely A, Callaghan JJ. Hip Fractures: Appropriate Timing to Operative Intervention. Poster. Orthopaedic Research Society Annual Meeting 2017.
22. Kern A, **Anthony CA**, Goetz J, Schumer R, Kruze AJ, Femino JE. Are Measures Of Hindfoot Alignment Sensitive To Pathology And Correction? Orthopaedic Research Society Annual Meeting 2017.
23. Bedard NA, Dowdle SB, **Anthony CA**, DeMik D, McHugh M, Bozic KJ, Callaghan JJ. What Are The Costs of Knee Osteoarthritis in the Year Prior to TKA? Poster. Orthopaedic Research Society Annual Meeting 2017.
24. Day MA, **Anthony CA**, Bedard N, Wilkinson B, Clark C, Callaghan J, Noiseux N. Improving satisfaction and decreasing cancellations with peri-operative communication in total joint arthroplasty patients. *Podium*. University of Iowa Department of Orthopedics & Rehabilitation, Senior Residents' Days, June 2017, Iowa City, Iowa.
25. Bedard NA, Dowdle SB, **Anthony CA**, DeMik D, McHugh M, Bozic KJ, Callaghan JJ. What Are The Costs of Knee Osteoarthritis in the Year Prior to TKA? *Podium*. American Association of Hip and Knee Surgeons November 2016.
26. **Anthony CA**, Lawler EA. A Technology Platform for Surgical Video Coaching in Orthopaedic Resident Training. *Video presentation*. American Foundation for Surgery of the Hand Annual Meeting 2016.
27. Volkmar A, **Anthony CA**, Shah A, Willey M, Karam M, Marsh JL. Assessment of Pain and Opioid Use After Common Orthopedic Trauma Procedures Using Automated Software Messaging. *Podium*. University of Iowa Carver College of Medicine Medical Student Research Day. September 2017.
28. Westermann RW, **Anthony CA**, Bedard N, Glass N, Bollier M, Hettrich CM, Wolf BR. Patient Factors Associated with Prolonged Opioid Use After Rotator Cuff Repair. *Podium*. American Shoulder and Elbow Surgeons Closed Meeting 2016.
29. **Anthony CA**, Rungpari E, Phisitkul P. Driving Reaction Time After Left Sided Foot and Ankle Procedures. *E-Poster*. American Orthopaedic Foot and Ankle Society Annual Meeting 2016.
30. **Anthony CA**, Thomas GW, Taylor L, Liu X, Anderson DD, Karam MD. A New Technology Platform For Intra-Operative Surgical Education and Competency Assessment. *Podium*. The University of Iowa Department of Orthopedics Senior Resident Research Day. June 10-11, 2016.
31. Westermann RW, **Anthony CA**, Bedard N, Glass N, Bollier M, Hettrich CM, Wolf BR. Patient Factors Associated with Prolonged Opioid Use After Rotator Cuff Repair. *Podium*. The University

of Iowa Department of Orthopedics Senior Resident Research Day. June 10-11, 2016.

32. **Anthony CA**, Lawler E, McDonald K, Glass NA, Shah A. Delivery of Patient Reported Outcome Instruments by Automated Mobile Phone Text Messaging. *Podium Presentation*. American Association of Hand Surgery Annual Meeting 2016.
33. **Anthony CA**, Lawler E, McDonald K, Apurva Shah A. Assessment of Postoperative Pain and Narcotic Usage by Automated Mobile Phone Software: A Pilot Study. *Poster*. American Association of Hand Surgery Annual Meeting 2016.
34. Ries ZG, Hogue M, **Anthony CA**, Martin CT, Pugely AJ. The Effect of Blood Transfusion on Short-Term Complications After Adult Spinal Deformity Surgery. *Poster*. Mid-American Orthopaedic Association Annual Meeting 2016.
35. **Anthony CA**, Pugely AJ, Gao Y, Westermann RW, Martin CT, Wolf BR, Amendola A. Complications and Risk Factors for Morbidity in Elective Hip Arthroscopy: A Review of 1,325 Patients. *Poster*. Mid-American Orthopaedic Association Annual Meeting 2016.
36. **Anthony CA**, Lawler E, McDonald K, Shah A. Assessment of Postoperative Pain and Narcotic Usage by Automated Mobile Phone Software: A Pilot Study. *Podium*. Mid-American Orthopaedic Association Annual Meeting 2016.
37. Westermann RW, **Anthony CA**, Duchman KR, Gao Y, Pugely AJ, Hettrich CM, Wolf BR. Hospital Admission is an Independent Risk Factor for Infection Following ACL Reconstruction. Mid-American Orthopaedic Association Annual Meeting 2016. *Podium*. Mid-American Orthopaedic Association Annual Meeting 2016.
38. Hancock KJ, Glass NA, **Anthony CA**, Wolf BR, Amendola A, Hettrich C, Albright JP, Bollier MJ. Performance of PROMIS in Healthy Patients Undergoing Meniscal Surgery. *Podium*. Mid-American Orthopaedic Association Annual Meeting 2016.
39. Bedard N, Callaghan JJ, Pugely AJ, Martin CT, Gao Y, Noiseux NO, **Anthony CA**. Can We Predict Discharge Status After Total Joint Arthroplasty? A Simple Calculator to Predict Home Discharge. *Podium Presentation*. Mid-American Orthopaedic Association Annual Meeting 2016.
40. Westermann RW, **Anthony CA**, Duchman KR, Pugely AJ, Gao Y, Hettrich CM. Incidence, Causes and Predictors of 30-day Readmission after Shoulder Arthroplasty. *Poster*. International Congress of Shoulder and Elbow Surgery 2016.
41. Duchman KR, **Anthony CA**, Westermann RW, Pugely AJ, Gao Y, Hettrich CM. Does Outpatient Surgery Reduce Short-term Complications Following Total Shoulder Arthroplasty? E-poster. International Congress of Shoulder and Elbow Surgery 2016.
42. **Anthony CA**, Glass N, Hancock K, Bollier M, Wolf BR, Hettrich CM. Use of PROMIS in a Healthy Patient Population with Shoulder Instability. *Podium*. International Congress of Shoulder and Elbow Surgery 2016.

43. Duchman KR, **Anthony CA**, Westermann RW, Pugely AJ, Gao Y, Hettrich CM. Total Shoulder Arthroplasty: Is Less Time in the Hospital Better? *Poster*. American Orthopaedic Association Annual Meeting 2016.
44. **Anthony CA**, Rungpari E, Phisitkul P. Driving Reaction Time After Left Sided Foot and Ankle Procedures. *Poster*. American Orthopaedic Association Annual Meeting 2016.
45. **Anthony CA**, Glass N, Hancock K, Bollier M, Wolf BR, Hettrich CM. Use of PROMIS in a Healthy Patient Population with Shoulder Instability. *Poster*. American Orthopaedic Association Annual Meeting 2016.
46. **Anthony CA**, Pugely AJ, Gao Y, Westermann RW, Martin CT, Wolf BR, Amendola A. What are Complications and Risk Factors for Morbidity in Elective Hip Arthroscopy? A Review of 1,325 Patients. *Poster*. American Academy of Orthopaedic Surgeons Annual Meeting 2016.
47. Hancock KJ, Glass NA, **Anthony CA**, Wolf BR, Amendola A, Hettrich C, Albright JP, Bollier MJ. Performance of PROMIS in Healthy Patients Undergoing Meniscal Surgery. *Podium*. American Academy of Orthopaedic Surgeons Annual Meeting 2016.
48. Pugely AJ, Martin CT, Ries Z, Gao Y, **Anthony CA**. Medicare's Hospital Acquired Conditions Policy: A Problem of Non-Payment After Spine Deformity Surgery. *Poster*. American Academy of Orthopaedic Surgeons Annual Meeting 2016.
49. Bedard N, Callaghan JJ, Pugely AJ, Martin CT, Gao Y, **Anthony CA**. Can We Predict Discharge Status After Total Joint Arthroplasty? A Simple Calculator to Predict Home Discharge. *Poster*. American Academy of Orthopaedic Surgeons Annual Meeting 2016.
50. Pugely AJ, Bedard NA, Martin CT, Gao Y, **Anthony CA**, Callaghan JJ. Can We Predict Discharge Status After Total Joint Arthroplasty? A Simple Calculator to Predict Home Discharge. *Poster*. ORS March 2016.
51. Phruetthiphath O, Gao Y, **Anthony CA**, Warth L, Pugely AJ, Liu S, Callaghan JJ. Incidence of and Preoperative Risks for Surgical delay in Primary Total Hip Arthroplasty. *Podium Presentation*. International Congress for Joint Reconstruction 2nd meeting in Hawaii during July 22-25, 2015.
52. Callaghan JJ, Pugely AJ, Bedard NA, Martin CT, Gao Y, **Anthony CA**, Noiseux NO. Can We Predict Discharge Status After Total Joint Arthroplasty? A Simple Calculator to Predict Home Discharge. *Poster*. American Association of Hip and Knee Surgeons.
53. **Anthony CA**, Liu X, Thomas G, Karam M. A Novel Technology Platform for Surgical Video Coaching in Orthopaedic Training: Our Initial Experience and Resident Feedback. *Poster*. Council of Residency Directors, American Orthopaedic Association Annual Meeting 2015.
54. **Anthony CA**, Liu X, Thomas G, Karam M. A Novel Technology Platform for Surgical Video Coaching in Orthopaedic Resident Training. *Poster*. University of Iowa Graduate Medical Education Leadership Symposium May 27<sup>th</sup>, 2015.

55. Olson TS, **Anthony CA**, Peterson AR. Using Sideline Concussion Tests in Referral Concussion Clinic. *Podium Presentation*. University of Iowa Carver College of Medicine Medical Student Research Day. September 2014.
56. Peterson AR, **Anthony CA**. Intraday Variation in Concussion Symptom Severity Scores. *Podium Presentation*. 2014 American Academy of Pediatrics (AAP) National Conference & Exhibition, October 11-14, 2014.
57. **Anthony CA**, McDermott S, McCunniff P, Albright JP. Quantitative Assessment of Knee Kinematics Utilizing a New Low Profile Pivot Shift Test. *Poster*. International Society for Computer Assisted Orthopaedic Surgery 2013. June 12-15, 2013.
58. **Anthony CA**, Duchman K, McDermott S, McCunniff P, Wolf BR, Bollier M, Thedens D, Albright JP. Double-Bundle ACL Reconstruction: Novice Surgeons Utilizing Computer-Assisted Navigation versus Experienced Surgeons. *Podium Presentation*. International Society for Computer Assisted Orthopaedic Surgery 2013. June 12-15, 2013.
59. **Anthony CA**, McDermott S, McCunniff P, Albright JP. Quantitative Assessment of Knee Kinematics Utilizing a New Low Profile Pivot Shift Test. *E-Poster*. ISAKOS Congress 2013. May 12-16, 2013.
60. Peterson AR, **Anthony CA**, Sotak K, Smith S. Intraday Variation in SCAT2 Symptom Severity Scores. *Podium Presentation*. 2013 American Medical Society For Sports Medicine 22nd Annual Meeting. Apr 17 - Apr 21, 2013.
61. **Anthony CA**, Smith S, Sotak K, Peterson AR. Observation Of Concussion Patients With SCAT2 And Text Messages. *Poster*. University of Iowa Carver College of Medicine Medical Student Research Day. September 7, 2012.
62. McDermott S, **Anthony CA**, McCunniff P, Albright JP. J-sign, TT-TG, and Quad Active MRI In Establishing Proper Tibial Tubercle Transfer Distance In Patients With Patellar Instability and Incongruency. *Poster*. ESSKA 2012 Conference in Geneva, Switzerland. May 3, 2012.
63. McCunniff P, **Anthony CA**, McDermott S, Albright JP. Recalcitrant Symptomatic Synovial Plica: Validation of Unique Clinical Exam Findings and Causal Relationship to Anterior Knee Pain. *Poster*. *Poster*. ESSKA 2012 Conference in Geneva, Switzerland. May 3, 2012.
64. McCunniff P, **Anthony CA**, McDermott S, Albright JP. Recalcitrant Symptomatic Synovial Plica: Validation of Unique Clinical Exam Findings and Causal Relationship to Anterior Knee Pain. *Multimedia Presentation*. Magellan Society, Lake Como, Italy. April 30, 2012.
65. **Anthony CA**, McDermott S, McCunniff P, Albright JP. Quantitative Assessment of Knee Kinematics Utilizing a New Low Profile Pivot Shift Test. *Poster*. University of Iowa Carver College of Medicine Medical Student Research Day. September 9, 2011.

66. McDermott S, **Anthony CA**, McCunniff P, Albright JP. J-sign, TT-TG, and Quad Active MRI In Establishing Proper Tibial Tubercle Transfer Distance In Patients With Patellar Instability and Incongruency. *Poster*. University of Iowa Carver College of Medicine Medical Student Research Day. September 9, 2011.
67. McCunniff P, **Anthony CA**, McDermott S, Albright JP. Recalcitrant symptomatic synovial plica: Validation of unique clinical exam findings and causal relationship to anterior knee pain. *Multimedia presentation*. University of Iowa Carver College of Medicine Medical Student Research Day. September 9, 2011.
68. **Anthony CA**. My Health Tracker: A Mobile Phone Application for Tracking Pain Symptoms. *Multimedia presentation*. NYU Interactive Telecommunications Spring Show. May 9-10, 2010.

## Patents

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1. Thomas G, Liu X, **Anthony CA**, Karam M, Taylor L. Platform for Surgical Education (OrthoVid). US provisional patent 62/350,845.

## Courses Taught

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### Designing Healthcare (Fall 2016, NYU Interactive Telecommunications Program)

Credits: 1

Students: 14

Level: Graduate

Course description:

What does it mean to design for individual patients or healthcare systems? What are common problems patients encounter as they traverse the healthcare system and what unique solutions and creative inspirations can we propose? In Designing Healthcare students will experience 4 patient case scenarios that intimately illustrate patient disease onset, initial interaction with the healthcare system, hospital stay, surgical encounters and post-operative or post treatment course. Each patient case presentation will be followed by discussion of observations and identification of inspirations, problems and design opportunities. Students will then identify a single design they would like to execute as their final project. Final project options will be broad and might manifest as code, an interface or medical device prototype, hacking the interior design of a healthcare space or a systems design proposal inspired by a patient case.

### Implantables (Fall 2017, NYU Interactive Telecommunications Program)

Credits: 1

Students: TBD

Level: Graduate

Course description:

We frequently implant metal, plastic and other materials in surgical procedures. What are the implications, constraints and possibilities of designing art, objects and tools that must negotiate a symbiosis with living human tissue? In this 1 credit course we will explore previous work in this area in order to equip students with an understanding of how to design and build objects that exist with human tissue. Students will explore relevant topics such as current examples, biocompatibility, infection, material options, and others. Students will learn, discuss and interact with the presented material at the initial session. Over the next month, each student will be required to develop and subsequently present a final project that might be a short presentation or a more developed prototype. Students will attend in

initial interactive lecture that will explore relevant topics such as current examples, biocompatibility, infection, material options, and others. Over the next month, students will develop a project proposal that will be presented at a follow up class.

## **Extracurricular/Volunteer**

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### **University of Iowa Athletic Team Coverage (2014-Present)**

- Assisted coverage of Men's/Women's basketball, baseball, softball teams

### **University of Iowa Orthopaedics Interest Group, *President* (2011-2012)**

- Coordinated group meetings with University of Iowa orthopaedic faculty

### **University of Iowa Technology Committee, *Member* (2010-2012)**

- Worked with University of Iowa to improve technology products and offerings for medical students

### **CAJA Life, *Founder 501(c3) entity* (2006-2010)**

- Organized fundraising campaign that raised over \$30k for spinal cord injured high school athlete (2006)
- Received grant from Garth Brooks Foundation (2008)
- Funded, developed and coordinated sports camps for Moroccan orphans (2009)

### **Anthony Speed Camps, *Founder* (2001-2005)**

- Created running speed enhancement system that trained nearly 300 athletes over five-year period
- Developed methods for improving running form, including large (6'x8') mirrors attached to moving vehicles for instant running form feedback

### **Iowa State University Football (1997-2001)**

Scholarship athlete; 4 year letter-winner and 3 year starter at wide receiver

- Two-time team co-captain (1999, 2000)
- Received Reuben J. Miller Award (2000) given to "*Player whose conduct on and off the field of play stamps him as having made the greatest contribution to Iowa State Football for the year*"
- Two-time All-Big 12 wide receiver (Honorable Mention 1998, 2000)
- Two-time Academic All-Big 12 (Honorable Mention 1998, 2000)
- Member of 2000 team that recorded best record at ISU since 1906 (9W-3L)
- Finished ISU career 5<sup>th</sup> in total career catches (114) and 6<sup>th</sup> in total career receiving yards (1,371)