

April 12, 2019

CURRICULUM VITAE

Roman Artym Hayda, MD, COL (ret)

Associate Professor, Brown University Warren Alpert School of Medicine

Director, Orthopaedic Trauma Service

Business Address: University Orthopedics, Inc.

Medical Office Center/Suite 200

2 Dudley Street

Providence, RI 02905

Business Telephone Number: 401 457-1553/1554

Cell phone number: 401 451-7761

Business Fax Number: 401 831-8992

Electronic Mail Address: Roman_Hayda@Brown.edu

EDUCATION

Undergraduate Johns Hopkins University

Baltimore, Maryland

September 1980-May 1984

Bachelor of Arts, Natural Sciences

George C Marshall Award

Honor Graduate ROTC

Medical School Uniformed Services University of the Health Sciences

Bethesda, Maryland

August 1984-May 1988

Doctor of Medicine

Award: Alpha Omega Alpha Honor Society

Other Advanced Degrees

POSTGRADUATE TRAINING

Internship: Fitzsimons Army Medical Center

Aurora, Colorado

Categorical General Surgery Intern

July 1988-June 1989

Residency: Walter Reed Army Medical Center

Washington, D.C.

Orthopaedic Resident

July 1990-June 1994

Fellowship: Hospital of the University of Pennsylvania

Philadelphia, PA

Orthopaedic Trauma Fellow
August 1997-July 1998

Other: AAOS Educators Course, Champaign, IL, 2000
Patient Safety Executive Development Program, Institute for Healthcare Improvement,
Boston, MA, 2010

POSTGRADUATE HONORS AND AWARDS

Army Medical Corps "A" Proficiency Designator in Orthopaedic Surgery, 2003
Order of Military Medical Merit, 2005
Teacher of the Year Award, Brown University Orthopaedic Surgery, 2013

MILITARY SERVICE

Colonel, US Army, Medical Corps, 1984-2008

Military Awards: Legion of Merit

Meritorious Service Medal (2)

Army Achievement Medal

Army Commendation Medal (2)

Overseas Service Ribbon (2)

National Defense Service Ribbon (2)

Global War on Terrorism Medal

PROFESSIONAL LICENSES AND BOARD CERTIFICATION

| | | |
|--------------|-------------|-------------------------------------|
| Virginia | 01010 46976 | Awarded 8/1991 inactive |
| Pennsylvania | MD-062653-L | Awarded 7/1997 inactive |
| New Jersey | 66013 | Awarded 7/1997 inactive |
| Rhode Island | MD12718 | Awarded 6/2008 Expires 30 June 2020 |

| | | |
|----------------------|------|---------------------------------------|
| Board Certification: | 1996 | American Board of Orthopaedic Surgery |
| | 2015 | Recertified ABOS |

ACADEMIC APPOINTMENTS

Associate Professor, Orthopedic Surgery, Brown University, 2008-present
Associate Clinical Professor University of Texas Health Science Center San Antonio, 2001-2008
Assistant Professor, Uniformed Services University of the Health Sciences, 2006-present
Residency Program Director, Orthopaedic Surgery, Brooke Army Medical Center 2003-2008
Associate Program Director, Orthopaedic Surgery, Brooke Army Medical Center, 2001-2003

HOSPITAL APPOINTMENTS

Director, Orthopedic Trauma, Rhode Island Hospital, 2016-present
Attending Surgeon in the Department of Orthopaedic Surgery, Rhode Island Hospital, 2008-Present
Co-Director, Orthopedic Trauma, Rhode Island Hospital, 2008-2016

Providence VA Medical Center, Contract Provider in Surgical Service, 2008-Present
Clinical Advisory Board, Center for Restorative and Regenerative Medicine, 2009-2012
Chief, Orthopaedic Trauma, Brooke Army Medical Center, 1998-2008
Chief, Orthopaedic Surgery Service, Brooke Army Medical Center, 2007
Acting Chief Orthopaedic Surgery Service, Brooke Army Medical Center, 2005
Base Realignment and Closure Planning Committee, Brooke Army Medical Center, 2006-2008

OTHER APPOINTMENTS

Member, University Orthopedics Quality Improvement Committee, 2018-present
UOI Executive Committee, 2015-present
Chair, Clinical Trial: Surgical Care review panel, Peer Reviewed Orthopaedic Research Program, Baltimore, MD, 2017
Chair, Congressionally Directed Medical Research Programs (CDMRP) FY18 Peer Review Orthopedic Research Program. 2018
Reviewer, 2019 Combat Casualty Care Research Program Prolonged Field Care, Peer Reviewed Orthopaedic Research Program, 2017
Reviewer, Royal British Legion Centre for Blast Injury Studies, Imperial College London, 2017
MRMC Combat Casualty Care Research Program, Reviewer 2015
Chair, Clinical Trials Award review panel, Peer Reviewed Orthopaedic Research Program, Fairfax, VA, November 2012.
Peer Reviewed Orthopaedic Research Program Clinical Trial Award Scientific Reviewer, 2010
Peer Reviewed Orthopaedic Research Program Career Development Program Reviewer, 2010
Orthopaedic Extremity Trauma Research Program Grant Reviewer, 2006-2008
Chair, OTA Disaster Preparedness Committee, 2017-present
Chair, OTA Military Committee 2014-2017
OTA Strategic Research Initiative Committee, 2014- 2016
OTA Database Taskforce, 2013-2016.
OTA Classification and Guidelines committee, 2012-2017
Disaster Preparedness Committee, Orthopaedic Trauma Association, 2008-2011
Trauma Critical Care Team (TCCT), National Disaster Medical System, member surgeon, 2019
Multi-Specialty Enhancement Team (MSET), National Disaster Medical System, member surgeon, 2011-2018
Rhode Island Responds disaster responder, 2018-present
Ukrainian Catholic University School of Physical and Occupational Therapy advisor, Lviv, Ukraine 2015-2017
Moderator, EWI XII (Extremity War injury Symposium), 2017
Moderator, EWI XI (Extremity War injury Symposium), 2015
Extremity War Injury Symposium Planning Committee, 2006-2014
METRC (Major Extremity Trauma Research Consortium) Executive Committee Member, 2009-2017
METRC PACS (compartment syndrome study) clinical data expert panel reviewer, 2014-2017
Co-Director of the Weiss Center for Surgical Research, 2011-present
AAOS/OTA Haiti Relief and Disaster Preparedness Committee, 2010

Volunteer, Project Hope, Operation Continuing Promise, USNS Comfort, Haiti, 2011
 Volunteer, Project Medishare, University of Miami Haiti Relief, 2010
 Volunteer, USNS Comfort, Haiti Relief, 2010
 After Action Report, Operation Unified Response, Bethesda, MD, 2010
 Co-Director, Distinguished Visiting Scholars Program, Landstuhl, Germany, 2007-2012
 MOTR (Military Orthopaedic Trauma Registry) Committee, 2006-2008
 War Amputee Consensus panelist, Walter Reed Army Medical Center, December 2003
 Essential Care in Theater Panelist, AMEDD Center and School, Fort Sam Houston, January 2002
 Reviewer, Journal of Bone and Joint Surgery, American, 2011-present
 Reviewer, Journal of Bone and Joint Surgery Reviews, 2013-present
 Reviewer, Journal of Bone and Joint Surgery Case Connector, 2014-present
 Reviewer, Clinical Orthopaedics and Related Research, 2003-present
 Reviewer, Journal of Trauma, 2000-2012
 Reviewer, Journal of Orthopaedic Trauma, 2009-present
 Reviewer, University of Pennsylvania Orthopaedic Journal, 1998-2003
 Guest Reviewer, American Journal of Surgery, 2015
 Guest reviewer, Journal of the Royal Society Interface, 2012
 Section Editor OTA Resident Lecture series 2003-2004
 Graduate Medical Education Committee, San Antonio Uniformed Health Education Consortium, 2001-2008
 Southwest Foundation for Biomedical Research-Associate Scientist (Adjunct), 2000-2007
 Co-Chair for triservice OTA military disaster preparedness exhibit AAOS, San Francisco, CA Feb 2004
 Chief, Extremity Trauma Study Branch, Institute of Surgical Research, San Antonio, Texas, 2000-2004
 NATO Human Factors and Medicine 089, Task Group 024 (Personal Protective Equipment Evaluation), 2002
 Joint Trauma Training Center site reviewer/planner, 1999
 Team Leader, 758th Forward Surgical Team Forward Element, Naray, Afghanistan, 2006
 Surgical Medical Trauma Augmentation Team (SMART) member, 2000-2003
 Orthopaedic Surgeon, 228th Combat Support Hospital, Ft Sam Houston, Texas, 2000-2002
 555th Forward Surgical Team, Ft Hood, Texas, 1998-2000
 Orthopaedic surgeon, 212th MASH, Olovo, Bosnia, 1996
 Orthopaedic surgeon, 67th CSH, Taszar, Hungary, 1996
 General Medical Officer in Charge, Sinop, Turkey, 1989-1990

HOSPITAL COMMITTEES

Orthopaedic Surgery representative to the Quality Improvement Committee Rhode Island Hospital and The Miriam Hospital, 2013-2016
 Multi-disciplinary Trauma Committee, Rhode Island Hospital, 2008-2017
 Lifespan's Risk Services Claims Committee, 2013-2016
 Chair, Search Committee, Orthopaedic Trauma Surgeon, 2015-16
 UOI/Brown Orthopaedic Foot and Ankle search committee, 2016
 Search Committee, Foot and Ankle Orthopaedic Surgery, 2011-2
 Multidisciplinary Trauma Committee, Brooke Army Medical Center, 1998- 2008

Quality Improvement, Orthopaedic Service, 95th Combat Support Hospital, Heidelberg, Germany, 1994-1997

MEMBERSHIP IN SOCIETIES

Active Member Orthopaedic Trauma Association, 2004-present
Fellow American Academy of Orthopaedic Surgery, 1996-present
American Orthopaedic Association 2007-2016
Society of Military Orthopaedic Surgeons 1991-present: Board Member 2007-2009
Fellow North American Association for the Study of Internal Fixation, 1998-present

PUBLICATIONS LIST

ORIGINAL PUBLICATIONS IN PEER-REVIEWED JOURNALS

1. Hayda R, M Tremaine, K Tremaine, S Banco, K Teed. The Effect of Metatarsal Pads and Their Positioning: A Quantitative Assessment, Foot and Ankle, 15(10), 561-6, 1994 PMID: 7834065
2. Arciero R, C Scoville, R Hayda, J Snyder. The Effect of Tourniquet Use in Anterior Cruciate Ligament Reconstruction. A Prospective Randomized Study, Am J Sports Medicine, 24(6), 758-764, 1996 PMID: 8947397
3. Hayda R, C Brighton, J Esterhai. Pathophysiology of Delayed Healing, Clin Orthop Rel Res, 355S, S31-S40, 1998 PMID: 9917624
4. Wei S, C Born, A Abene, A Ong, R Hayda, W DeLong. Diaphyseal Forearm Fractures Treated With and Without Bone Graft, J Trauma, 46(6), 1045-8, 1999 PMID: 10372622
5. Harris RM, L Griffin, R Hayda, MS Rountree, R Bryant, N Rossitor. Change in lower extremity morbidity from landmine injury: An analysis of new protective Footwear, J Orthop Trauma 01/2000; 14(2):145
6. Topp R, R Hayda, G Benedetti, T Twitero. The incidence of neurovascular injury during external fixator placement without radiographic assistance for lower extremity fractures: A cadaveric Study, J Trauma, 55(6), 955-8, 2003 PMID: 14608172
7. Hayda R, R Harris, C Bass: Blast Injury Research. Modeling Injury effects of landmines, bullets and bombs, Clin Orthop Related Res, 422, 97-108, 2004 PMID: 15187840
8. Hepburn M, D Dooley, R Hayda. Minocycline-induced Black Bone Disease, Orthopaedics 28(5), 501-501, 2005 PMID: 15945609
9. Kauvar DS, TW Baskin, RA Hayda, RR Martin. Complete traumatic hemipelvectomy resulting from roadside guardrail penetration of a motor vehicle. Injury Extra 10/2005; 36(10):454-457
10. Andersen R, HM Frisch, G Farber, R Hayda. Definitive Treatment of Combat Casualties at Military Medical Centers, J Am Acad Orthop Surg, 12 (10) S18-S23, 2006 PMID: 17003202

11. Hayda R, M Bosse, Moderators Summary. Management of Segmental Bone Defects, J Am Acad Orthop Surg, 12 (10) S142-S144, 2006 PMID: 17003187
12. Ho D, P Hu , D Carmack, R Hayda, A Pohl , R Dunbar, R Harris, H Frisch. Design and Evaluation of International Video Teleconference (iVTC) for Orthopedic Trauma Education. AMIA Ann Symp Proc. 951, 2006 PMID: 17238570
13. Johnson EN, Burns TC, Hayda RA, Hospental DR, Murray CK. Infectious Complications of Open Type III Tibial Fractures among Combat Casualties, Clinical Infectious Diseases, 45: 409-415, 2007 PMID: 17638186
14. Kirk K, Hayda RA. Compartment Syndrome and Lower Limb Fasciotomies in the Combat Environment, Foot Ankle Clin N Amer, 15 (1): 41-61, 2010. PMID: 20189116
15. Helgeson MD, Potter BK, Burns TC, Hayda RA, Gajewski DA. Risk Factors for and Results of Late or Delayed Amputation Following Combat-related Extremity Injuries, Orthopedics, 33 (9): 1-7, 2010. PMID: 20839713
16. Bariteau J, Beutel BG, Kamal R, Hayda RA, Born CT. Use of Near-Infrared Spectrometry for the Diagnosis of Lower Extremity Compartment Syndrome, Orthopedics, 34(3):178, 2011. PMID: 21410124
17. Sawyer GA. Hayda R. Upper-extremity deep venous thrombosis following humeral shaft fracture. Orthopedics. 34(2):141, 2011 PMID: 21323281
18. Burns TC, Stinner DJ, Mack AW, Potter BK, Beer R, Eckel TT, Possley DR, Beltran MJ, Hayda RA, Andersen RC, Keeling JJ, Frisch HM, Murray CK, Wenke JC, Ficke JR, Hsu JR, Skeletal Trauma Research Consortium, Microbiology and injury characteristics in severe open tibia fractures from combat J Trauma, 72 (4): 1062-1067, 2012. PMID: 22491628
19. Ahmed S, Burns TA, Landt C, Hayda RA. Heterotopic Ossification in High Grade Open Fractures Sustained in Combat: Risk Factors and Prevalence, J Orthop Trauma, 27(3):162-169, 2013. PMID: 22584683
20. Wardak MI, Siawash I, Hayda RA. Compressive External Fixation of Patella Fractures: a Minimally Invasive Tensioned Wire Method. J Trauma, 72 (5):1393–1398, 2012. PMID: 22673272
21. The METALS Study group. Doukas WC, Hayda RA, Frisch HM, Anderson RC, Mazurek MT, Ficke JR, Keeling JJ, Pasquina PF, Wain HJ, Carlini AR, MacKenzie EJ, METALS: Limb Salvage vs amputation of the lower extremity combat injury outcomes. J Bone Joint Surg Am. 95(2):138-145, 2013 PMID: 23324961
22. Thomas NP, Tran N, Tran PA, Walters JL, Jarrell JD, Hayda RA, Born CT. Characterization and bioactive properties of zirconia based polymeric hybrid for orthopedic applications J Mater Sci Mater Med. 2014 Feb;25(2):347-54. doi: 10.1007/s10856-013-5093-0. Epub 2013 PMID: 24243225
23. Tran N, Tran PA, Jarrell JD, Engiles JB, Thomas NP, Young MD, Hayda RA, Born CT. In vivo caprine model for osteomyelitis and evaluation of biofilm-resistant intramedullary nails. Biomed Res Int. 2013 PMID: 23841085

24. Young MD, Tran N, Tran PA, Jarrell JD, Hayda RA, Born CT. Niobium oxide-polydimethylsiloxane hybrid composite coatings for tuning primary fibroblast functions. *J Biomed Mater Res A*. 2013. PMID: 23776075
25. Daniels AH, McDonnell M, Born CT, Hayda RA, Ehrlich MG, Trafton PG, Fischer SA, DiGiovanni CW. Critical Analysis of a Trauma Fellowship-Modeled, Six-Year Orthopaedic Surgery Training Program. *J Bone Joint Surg Am*, 95:e108(1-8), 2013. PMID: 23925753
26. Eltorai A, Daniels A, Born CT, Adams C, Hayda RA. Motorcycle Helmet use in Rhode Island. *Rhode Island Medical Journal*, 96: 12, 2013. PMID: 24303509
27. Thomas NP, Tran N, Tran PA, Walters JL, Jarrell JD, Hayda RA, Born CT. Characterization and bioactive properties of zirconia based polymeric hybrid for orthopedic applications. *J Mater Sci Mater Med*. 2014 Feb;25(2):347-54
28. Bariteau JT, Waryasz GR, McDonnell M, Fischer SA Hayda RA, Born CT. Fungal Osteomyelitis and Septic Arthritis. *J Am Acad Orthop Surg*, 22(6) 2014 PMID: 24860135
29. Daniels AH, Daiello LA, Lareau CR, Robidoux KA, Luo W, Ott B, Hayda RA, Born CT. Preoperative Cognitive Impairment and Psychological Distress in Hospitalized Elderly Hip Fracture Patients. *Am J Orthop*. 43(7):E146-52. 2014. PMID: 25046191
30. Pidgeon TS, Borenstein T, Daniels AH, Murali J, Hayda RA. Understanding Multiple Sclerosis: Essentials for the Orthopaedic Surgeon, *JBJS Reviews*, 2014 Jul;2(7) PMID 27490061
31. Mansuripur K, Deren M, Hayda RA, Born CT. Initial management of ankle fractures in the overweight and obese: The Providence Pinch. *J Emergency Medicine*, 2014 Sep 8. S0736-4679. PMID: 25214182
32. Kadakia RJ, Hsu RY, Hayda R, Lee Y, Bariteau JT. Evaluation of one-year mortality after geriatric ankle fractures in patients admitted to nursing homes. *Injury*. 2015;46(10):2010-5. PMID:26120016
33. Borenstein TR, Cohen E, McDonnell M, Kamal RN, Hayda RA. Deltoid Compartment Syndrome After Prolonged Lateral Decubitus Positioning: A Case Report. *JBJS Case Connect*. 2015 Apr-Jun;5(2):e45 PMID:29252699
34. Blood T, Feller RJ, Cohen E, Born CT, Hayda R. Atypical Fractures of the Femur: Evaluation and Treatment. *JBJS Rev*. 2015 3(3). PMID:27490887
35. Bariteau JT, RY Hsu, V Mor, Y Lee, CW DiGiovanni, R Hayda. Operative Versus Nonoperative Treatment of Geriatric Ankle Fractures: A Medicare Part A Claims Database Analysis. *Foot & Ankle International* 36(6):648-55, 2015. PMID: 25712117
36. Babu J, Shah KN, Mansuripur PK, Hayda R Delayed Erosion of a Pelvic Reconstruction Plate into the Bladder Causing Recurrent Urinary Tract Infections: A Case Report. *JBJS Case Connect*. 2015;5(4):e97. PMID: 29252803
37. Tran N, Kelley MN, Tran PA, Garcia DR, Jarrell JD, Hayda RA, Born CT. Silver doped titanium oxide-PDMS hybrid coating inhibits *Staphylococcus aureus* and *Staphylococcus epidermidis* growth on PEEK. *Materials Science & Engineering. C, Materials for Biological Applications*. 49:201-9, 2015. PMID: 25686940

38. Vopat BG, Daniels AH, Lareau CR, Christino MA, Kane PM, Hayda RA, Born CT. Hybrid Anterolateral Approach for Open Reduction and Internal Fixation of Femoral Neck Fractures. *Orthopedics*. 38(7):430-4, 2015. PMID: 26186310
39. Harvey EJ, Cannada L, Deren M, Hayda RA, Melton D. Dealing with Catastrophic Outcomes and Amputations in the Mangled Limb *J Orthop Trauma*, Supplement, December 2015 29: S39-42. PMID: 26584265
40. Kadakia RJ, Hsu RY, Hayda R, Lee Y, Bariteau JT. Evaluation of one-year mortality after geriatric ankle fractures in patients admitted to nursing homes. *Injury*, 2015. 46: 2010-5. PMID 26120016
41. Hsu RY, Lee Y, Hayda R, DiGiovanni CW, Mor V, Bariteau JT. Morbidity and Mortality Associated with Geriatric Ankle Fractures: A Medicare Part A Claims Database Analysis. *J Bone Joint Surg Am*. 2015 Nov 4;97(21):1748-55. PMID: 26537162
42. Vaughn J, Gotha H, Cohen E, Fantry AJ, Feller RJ, Van Meter J, Hayda R, Born CT. Nail Dynamization for Delayed Union and Nonunion in Femur and Tibia Fractures. *Orthopedics*. 2016; 39(6):e1117-e1123. PMID:27575039
43. Beltran MJ, Becker TE, Hurley RK, Gurney JM, Hayda RA. Resuscitation and Treatment of Shock, *J Orthop Trauma* 2016; Oct 30 (10) Supplement, S2-S6. PMID:27661422
44. Johnson JP, Borenstein TR, Waryasz GR, Klinge SA, McClure PK, Chambers AB, Hayda RA, Born CT. Vertically oriented femoral neck fractures: A biomechanical comparison of three fixation constructs. *J Orthop Trauma*. 2017 (23). PMID: 28471920
45. Deren ME, Babu J, Cohen EM, Machan J, Born CT, Hayda R Increased Mortality in Elderly Patients with Sarcopenia and Acetabular Fractures. *J Bone Joint Surg Am*. 2017;99(3):200-206. PMID:28145950
46. Fantry AJ, O'Donnell SW, Born CT, Hayda RA. Deep Infections After Syndesmotic Fixation With a Suture Button Device. *Orthopedics*. 2017; 5:1-5. PMID:28056156
47. Johnson JP, Borenstein TR, Waryasz GR, Klinge SA, McClure PK, Chambers AB, Hayda RA, Born CT. Vertically Oriented Femoral Neck Fractures: A Biomechanical Comparison of 3 Fixation Constructs. *J Orthop Trauma*. 2017 Jul;31(7):363-368. PMID 28471920
48. Johnson JP, Kleiner J, Klinge SA, McClure PK, Hayda RA, Born CT. Increased Incidence of Vascular Injury In Obese Patients with Knee Dislocations. *J Orthop Trauma*. 2017 Oct 23. PMID 29065033
49. Johnson JP, Goodman AD, Haag AM, Hayda RA. Decreased Time to Antibiotic Prophylaxis for Open Fractures at a Level One Trauma Center. *J Orthop Trauma*. 2017 Nov;31(11):596-599. PMID 29053543
50. Hayda RA, Hsu RY, DePasse JM, Gil JA. Radiation Exposure and Health Risks for Orthopaedic Surgeons. *J Am Acad Orthop Surg*. 2018 Apr 15;26(8):268-277. PMID: 29570497
51. Hayda RA, Hsu RY, DePasse JM, Gil JA. Radiation Exposure and Health Risks for Orthopaedic Surgeons. *J Am Acad Orthop Surg*. 2018 Apr 15;26(8):268-277. PMID: 29570497

52. Bokshan SL, Marcaccio SE, Blood TD, Hayda RA. Factors influencing survival following hip fracture among octogenarians and nonagenarians in the United States. *Injury*. 2018 Mar;49(3):685-690. PMID: 29426609
53. Pidgeon TS, Johnson JP, Deren ME, Evans AR, Hayda RA. Analysis of mortality and fixation failure in geriatric fractures using quantitative computed tomography. *Injury*. 2018 Feb;49(2):249-255 PMID: 29258687
54. Johnson JP, Kleiner J, Klinge SA, McClure PK, Hayda RA, Born CT. Increased Incidence of Vascular Injury in Obese Patients With Knee Dislocations. *J Orthop Trauma*. 2018 Feb;32(2):82-87. PMID: 29065033
55. Schmidt AH, Bosse MJ, Obrebsky WT, O'Toole RV, Carroll EA, Stinner DJ, Hak DJ, Karunakar M, Hayda R, Frey KP, Di J, Zipunnikov V, MacKenzie E; Major Extremity Trauma Research Consortium (METRC). Continuous Near-Infrared Spectroscopy Demonstrates Limitations in Monitoring the Development of Acute Compartment Syndrome in Patients with Leg Injuries. *J Bone Joint Surg Am*. 2018 Oct 3;100(19):1645-1652. PMID: 30277994
56. Johnson JP, Kleiner J, Goodman AD, Gil JA, Daniels AH, Hayda RA. Treatment of femoral neck fractures in patients 45-64 years of age. *Injury*. 2018 Nov 16. PMID: 30471942
57. Shah KN, Johnson JP, O'Donnell, SW, Gil JA, Born CT, Hayda RA. External Fixation in the Emergency Department for Pilon and Unstable Ankle Fractures. *J Am Acad Orthop Surg*. 2019 27(12):e577-e584 PMID: 30394911
58. Blood T, Deren M, Goodman A, Hayda RA, Trafton PG. Assessment of a Geriatric Hip fracture Program: Analysis of Harmful Adverse Events Using the 'Global Trigger Tool, *J Bone Joint Surg Am*, 2019, 17;101(8):704-709. PMID:30994588
59. Mitchell SL, Hayda R, Chen AT, Carlini AR, Ficke JR, Doukas WC, Frisch HM, MacKenzie EJ, METALS Study Group. "The Military Extremity Trauma Amputation/Limb Salvage (METALS) Study: Outcomes of Amputation vs Limb Salvage Following Major Upper Extremity Trauma, *J Bone Joint Surg Am*, 2019 (accepted)

OTHER PEER-REVIEWED PUBLICATIONS

1. Hayda R, M Mazurek, E Powell, M Richardson, HM Frisch, R Andersen, J Ficke. From Iraq Back to Iraq Modern Combat Orthopaedic Care, Instructional Course Lectures, vol 57, 2008 PMID: 18399572
2. Covey D, R Aaron, CT Born, J Calhoun, T Einhorn, R Hayda, S Levin, M Mazurek, C Murray, E Powell, E Schwartz, J Wenke. Orthopaedic War Injury: From Combat Casualty Care to Definitive Treatment: A current review of Clinical Advances, Basic Science, and Research Opportunities, Instructional Course Lectures, vol 57, 2008. PMID: 18399571
3. Born CT, Monchik KO, Hayda RA, Pollak AN, Bosse MJ, Essentials of Disaster Management: The role of the orthopaedic surgeon. Instructional Course Lectures #60, AAOS, 2011 PMID: 21553757

4. Born CT, Cullison TR, Dean JA, Hayda RA, McSwain N, Riddles LM, Shimkus AJ: Partnered Disaster Preparedness: Lessons learned from international events. J Am Acad Orthop Surg, 19 Suppl 1: S44-8, 2011. PMID: 21304048

BOOKS AND BOOK CHAPTERS

1. “Elbow (Fractures and Dislocations)”. Orthopaedics, R.H. Fitzgerald, H. Kaufer, A.C. Malkani, Ed., St. Louis, Mosby, 2002, p 286-295
2. “Pelvis Fractures and Dislocations”, Emergency War Surgery Manual, 3rd Edition, U.S. Government Printing Office, 2004
3. Coauthor and contributor “General Surgical Principles” and “Special Surgical Considerations” Care of the Combat Amputee, Borden Institute, U.S. Government Printing Office, Washington D.C., 2009.
4. Hayda, RA, Ertl W. “Amputations” Orthopaedic Knowledge Update: Trauma 4, AAOS, 2010.
5. “Blast and Ballistic Injury” Combat Orthopedic Surgery: Lessons Learned in Iraq and Afghanistan, B Owens, P Belmont, Ed. SLACK Publishing. 2011.
6. “Burns and Extremity Injury: a difficult combination” Front Line Extremity and Orthopaedic Surgery - A Practical Guide, L Bone, C Mamczak, Ed. Springer. 2014
7. Born CT, R Calfee, R Hayda, T Gerlinger, W Kadrmas, P Ginatt. “Disaster management”, Skeletal Trauma, 5th Edition, B Browner, J Jupiter, Ed , Elsevier. 2015
8. McClure P, R Hayda. “Mass Casualty and Disaster Preparedness”, Orthopaedic Knowledge Update Trauma, 5th Ed, AAOS, 2016
9. Mansuripur K, R Hayda. “External Fixation” AAOS Let’s Discuss Common Orthopaedic Emergencies Surviving the Night, 2016
10. Hsu R, R Hayda, Polytrauma Care, Orthopaedic Knowledge Update 12, AAOS, 2016
11. “Trauma”, Comprehensive Board Review in Orthopedic Surgery, R Kamal, A-P Weiss, Ed, Thieme, 2016
12. “Gait, Amputation, Prosthetics, Orthotics and Rehabilitation” Comprehensive Board Review in Orthopedic Surgery, R Kamal, A-P Weiss, Ed, Thieme, 2016
13. “Proximal Femur Nonunion” Nonunion: Diagnosis, Evaluation and Management, A Agarwal, Ed, Springer, 2018
14. Editor: Postoperative Orthopaedic Rehabilitation, American Academy of Orthopaedic Surgeons. Wolters, Kluwer, Philadelphia, Andrew Green, Roman Hayda Ed 2018.

15. "General Principles of Fracture Treatment and Rehabilitation" in: Postoperative Orthopaedic Rehabilitation, American Academy of Orthopaedic Surgeons. Wolters, Kluwer, Philadelphia, Andrew Green, Roman Hayda Ed 2018

OTHER NON-PEER REVIEWED PUBLICATIONS

CORPORATE AUTHORSHIP OR MULTICENTER TRIALS

1. Pollak AN, Ficke CJ. Extremity war injuries: collaborative efforts in research, host nation care, and disaster preparedness. Extremity War Injuries IV Session Moderators. J Am Acad Orthop Surg. 2010 Jan;18(1):3-9. PMID: 20044486
2. Pollak AN, Ficke JR. Extremity war injuries: challenges in definitive reconstruction. Extremity War Injuries III Session Moderators. J Am Acad Orthop Surg. 2008 Nov;16(11):628-34. PMID:18978285
3. Castillo RC, Mackenzie EJ, Bosse MJ, METRC Investigators. Measurement of functional outcomes in the Major Extremity Trauma Research Consortium (METRC). Journal of the American Academy of Orthopaedic Surgeons. 20 Suppl 1:S59-63, 2012
4. METRC, "Building a Clinical Research Network for Orthopaedic Trauma: The Major Extremity Trauma Research Consortium (METRC)" J Orthop Trauma 2016 Jul;30(7):353-61 PMID: 27333458
5. Bosse MJ, Morshed S, Reider L, Ertl W, Toledano J, Firoozabadi R, Seymour RB, Carroll E, Scharfstein DO, Steverson B, MacKenzie EJ; METRC. Transtibial Amputation Outcomes Study (TAOS): Comparing Transtibial Amputation With and Without a Tibiofibular Synostosis (Ertl) Procedure. J Orthop Trauma. 2017 (31) Suppl 1:S63-S69. PMID:28323804
6. Bosse MJ, Teague D, Reider L, Gary JL, Morshed S, Seymour RB, Toledano J, Cannada LK, Steverson B, Scharfstein DO, Luly J, MacKenzie EJ; METRC Outcomes After Severe Distal Tibia, Ankle, and/or Foot Trauma: Comparison of Limb Salvage Versus Transtibial Amputation (OUTLET). J Orthop Trauma. 2017 (31) Suppl 1:S48-S55. PMID:28323802
7. Schmidt AH, Bosse MJ, Frey KP, O'Toole RV, Stinner DJ, Scharfstein DO, Zipunnikov V, MacKenzie EJ; METRC. Predicting Acute Compartment Syndrome (PACS): The Role of Continuous Monitoring. J Orthop Trauma. 2017 (31) Suppl 1:S40-S47. PMID:28323801
8. O'Toole RV, Joshi M, Carlini AR, Murray CK, Allen LE, Scharfstein DO, Gary JL, Bosse MJ, Castillo RC; METRC. Local Antibiotic Therapy to Reduce Infection After Operative Treatment of Fractures at High Risk of Infection: A Multicenter, Randomized, Controlled Trial (VANCO Study). J Orthop Trauma. 2017 (31) Suppl 1:S18-S24. doi: PMID: 28323797
9. Bosse MJ, Murray CK, Carlini AR, Firoozabadi R, Manson T, Scharfstein DO, Wenke JC, Zadnik M, Castillo RC; METRC. Assessment of Severe Extremity Wound Bioburden at the Time of Definitive Wound Closure or Coverage: Correlation With Subsequent Postclosure Deep Wound Infection (Bioburden Study). J Orthop Trauma. 2017;31 Suppl 1:S3-S9. PMID:28323795

PUBLICATIONS SUBMITTED OR IN PREPARATION

ABSTRACTS

1. "Foot and Ankle Injuries During Operation Desert Storm and Desert Shield: An Analysis", SOMOS 1991, El Paso, Texas, December, 1991
2. "Open Injuries of the Foot and Ankle in Modern Warfare: An Analysis of Desert Storm Casualties", SOMOS 1992, Colorado Springs, Colorado, December 1992
3. "The Effect of Metatarsal Pads and Their Positioning: A Quantitative Assessment", SOMOS 1992 Colorado Springs, Colorado, December, 1992
4. "The Efficacy of Current Landmine Protective Footwear: Change In Medical Outcomes", Hayda R, RM Harris, CD Bass, S Rountree, SOMOS 2000, San Antonio, Texas, December, 2000
5. "Acetabular Fractures in Active Duty Service Members", Frisch, HM, R Hayda, RM Harris, J Kirby, SOMOS 2000 Annual Meeting, San Antonio, Texas, December, 2000
6. "A Comparison of the Triceps-Sparing vs. Transolecranon Approach of the Distal Humerus: An Anatomic Study of Articular Surface Exposure", Rose S, R Hayda, M Bagg OTA, San Antonio, Texas, October 2000, Hand Society Meeting, Seattle WA, 2001
7. "Bone Imaging Around Hardware: Use of a Novel Multislice Multidetector Computed Tomography to Eliminate Metal Artifact in the Evaluation of Fracture Position and Healing", Minihane K, R Hayda, B Penrod, SOMOS 2000 Annual Meeting, San Antonio, Texas, December 2000
8. "Low Energy Sports Related Acetabular Fractures: A Case Report and Review of the Literature", Brown D, Hayda R SOMOS 2000 Annual Meeting, San Antonio, Texas, December 2000
9. "In Vitro Fatigue Strength of Common Tibial Intramedullary Nail Distal Locking Screws", Zubak J, R Harris, R Hayda, L Griffin AAOS Annual Meeting, San Francisco, California, March 2001
10. "The incidence of neurovascular injury in lower extremity external fixator placement without radiographic assistance-a cadaveric study" Topp R, R Hayda, G Benedetti, T Twitero, OTA, San Diego, 2001, SOMOS, San Diego, CA 2002
11. "Chronic Osteomyelitis and Marjolin's ulcer after a landmine injury: A Case Report and Literature Review" Thompson JC, R Hayda, Society of Military Orthopaedic Surgeons, San Diego, CA, 2002

12. "Radiographic Classification of Pelvic Fractures: Interobserver and Intraobserver Reliability". RL Ursone, MR Bagg, RA Hayda, JF Kragh. SOMOS Vail, Co, 2004
13. "War-Related Fractures about the Elbow; Early Outcomes of the Brooke Army Medical Center Experience." Hayda RA, Walick KS, Bagg MR Society of Military Orthopedic Surgeons, Vail, CO, 2004.
14. "The Brooke Army Medical Center Heterotopic Ossification Experience in the Global War on Terrorism (preliminary study)" SI Ahmed, RA Hayda, SOMOS, Orlando FL, 2005
15. "A Comparison of Outcomes and Treatments of Open Pilon Fractures in Operation Iraqi Freedom and Historical Civilian Controls". Orr JD, Ficke JR, RA Hayda, Society of Military Orthopaedic Surgeons, Orlando, FL, 2005.
16. "Scope of Segmental Bone Defects in GWOT", Extremity War Injury Symposium, Washington D.C. 2006
17. "Treatment of Radiographically Occult Intertrochanteric Femur Fractures". Kirby J, Hayda RA, Kragh JF, Ficke J, Mansfield L, Ward JA, Bagg M American Academy of Orthopaedic Surgeons, Chicago, IL, 2006
18. "Traumatic Amputations Due to Motor Vehicle Collisions with Guardrails: A Case Series and Review of the Literature" Tucker C, Gerlinger T, J Ficke, R Hayda, Society of Military Orthopaedic Surgeons, Honolulu HI, 2006
19. "Principles and Techniques of Debridement" Extremity War Injuries Symposium 2, Washington, D.C. 2007
20. "Overview of Bone Stabilization Issues" Extremity War Injuries Symposium 2, Washington, D.C. 2007
21. "The Brooke Army Medical Center Heterotopic Ossification Experience in the Global War on Terrorism" S Ahmed, RA Hayda, J Ward, AOA Annual Meeting, Asheville, NC, 2007
22. "Massive Periarticular Reconstruction", Extremity War Injury Symposium 3, Washington, DC, January 2008
23. Jarrell JD, Puckett S, Morgan J, Hayda RA, Born CT Durability of Bioactive, Antimicrobial Biointerface on External Fixation Pins (ORS2010-3228), Poster Presentation at the ORS 56th Annual Meeting New Orleans, LA March 2010.
24. Jarrell JD, Spenciner D, Morgan JR, Hayda RA, Born CT Antimicrobial Hybrid Coatings for External Fixation Pins, Poster Presentation Society of Biomaterials, Seattle, Washington April, 2010
25. Tran P, Jarrell J, Young M, Walters J, Hayda RA, Born CT: Hybrid Surface Treatments for Bioactive and Antimicrobial Orthopaedic Trauma Implants, Poster Presentation Lifespan 18th Annual Research Celebration, Providence, RI 2010

26. Bariteau JT, Beutel BG, Kamal R, Hayda RA, Born CT: Use of Near-Infrared Spectrometry for the Diagnosis of Lower Extremity Compartment Syndrome, Poster Presentation Lifespan 18th Annual Research Celebration, Providence, RI 2010
27. Mamczak C, Patterson B, Bone L, Hayda R. Pelvic Fracture Experience from the Haitian Experience. OTA Annual Meeting, Baltimore, MD, 2010
28. The METALS study group. MacKenzie E, Doukas W, Andersen R, Ficke J, Hayda R, Frisch H. The Military Extremity Trauma Amputation/Limb Salvage Study: Comparing Outcomes for Amputation versus Limb Salvage following Major Lower Extremity Trauma, OTA Annual Meeting, Baltimore, MD, 2010
29. Racusin AW, Masini BD, Hayda RA, Hsu JR. Osteoarticular Allograft for the Treatment of Distal Femur Blast Injury, Society of Military Orthopaedic Surgeons Annual Meeting, Vail, CO, 2010.
30. Jarrell J, Pucket, Morgan, Hayda, Born, Durability of Bioactive, Antimicrobial Biointerface on External Fixation Pins, Abstract, 56th ORS Annual meeting, 2010
31. Tran PA, Jarrell J D, Young MD, Walters JL, Hayda RA, Born CT. Effects of Addition of Transition Metal Oxides to Polymer on Growth of Human Cells. Society for Biomaterials, Orlando FL, 2011.
32. Jarrell JJ, Tran P, Baker C, Morgan J, Hayda RA, Born CT: Surface Treatments for Orthopaedic Implants which Prevent Bacterial Growth and Support Cell Proliferation Poster Presentation Soc for Biomaterials 2011, Orlando, FL
33. Jarrell JD, Tran PA, Baker C, Morgan JR, Hayda RA, Born CT: Bioactive Hybrid Material Surface Treatments for Infection Resistant Implants Without Drugs, Materials and Processes for Medical Devices meeting, Podium Presentation, 2011 Minneapolis, MN
34. Tran PA, Jarrell JD, Hayda RA, Born CT: Improving Bioresponse to Polymers using Zirconium and Tantalum Hybridization, Materials and Processes for Medical Devices meeting, Podium Presentation, 2011 Minneapolis, MN.
35. Jarrell JD, Tran P, Young MD, Walters JL, Hayda RA, Born CT: Transitional Metal Oxide Hybrid Surface Treatments for Bioactive and Antimicrobial Orthopaedic Trauma Implants, Orthopaedic Research Society, Poster Presentation 2011, San Diego, CA
36. Tran PA, Jarrell JD, Hayda RA, Born CT: Improving Bioresponse to Polymers using Zirconium and Tantalum Hybridization, Materials and Processes for Medical Devices meeting, Podium Presentation, 2011 Minneapolis, MN
37. Thomas NP, Tran N, Jarrell J, Hayda R, Born CT: Osteoblast and Fibroblast Response to Zirconia and Titania Polymer Hybrids, Podium Presentation, Biomedical Engineering Symposium (BMES), 2011 Hartford, CT

38. Young M, Tran P, Tran N, Jarrell JD, Hayda RL, Born CT: Effects of Niobium oxide coating for implantable materials on primary fibroblast growth, Poster Presentation, AMA Student Symposium, 2011, New Orleans, LA
39. Burns TC, Stinner DJ, Hayda RA et al. Injury Factors that Influence Outcome in Severe Open Tibia Fractures From Combat. Poster Presentation OTA Annual Meeting, San Antonio, TX, 2011.
40. Burns TC, Stinner DJ, Hayda RA, et al. Cultures, Infections, and Injury Characteristics in Severe Open Tibia Fractures From Combat. Podium presentation SOMOS annual Meeting, San Diego, 2011
41. Tran NL, PA Tran, C Baker, JD Jarrell, RA Hayda, CT Born. In vitro and in vivo evaluation of bioactive hybrid materials coating for infection resistant implants. TERMIS World Congress, Vienna 2012. *Journal of Tissue Engineering and TRegenerative Medicine*, 6 suppl 1, 2012.
42. The METALS Study Group. Functional Outcomes Following Major Upper Extremity Limb Trauma in the Military. Poster Presentation OTA Annual Meeting, Minneapolis, MN, 2012.
43. Major Extremity Trauma Research Consortium (METRC). “Apples to Apples”: Moving to the New OTA Fracture Severity Classification. Poster Presentation OTA Annual Meeting, Minneapolis, MN, 2012.
44. Major Extremity Trauma Research Consortium (METRC). Identifying Enrollment Challenges and Discovering Research Opportunities in an Orthopaedic Trauma Consortium: The Value of a “Start Up” Registry. Poster Presentation OTA Annual Meeting, Minneapolis, MN, 2012.
45. Daniels AH, LA Daiello, J Badger, C Born, R Hayda, BR Ott, J Szaro, MR Cooper. Cognitive Assessment after Hip Fracture in the Elderly (CAFÉ): Study Protocol and Selected baseline results of a 12 month prospective cohort study. 20th Annual Hospital Research Celebration, Providence Rhode Island, 2012.
46. D. Jarrell, N. Tran, P.A. Tran, J. Engiles, R.A. Hayda, C.T. Born Bioactive Hybrid Materials Coating for Infection Resistant Implants and Devices Third International Conference on Multifunctional, Hybrid and Nanomaterials, Sorrento, Italy, March 2013
47. Daniels AH, Daiello LA, Lareau C, Aaron DL, Robidoux KA, Luo W, Hayda RA, Born CT. Preoperative Cognitive Impairment, Pain, and Psychological Stress in Hospitalized Elderly Hip Fracture Patients, Poster Presentation, OTA annual Meeting, Phoenix, AZ, 2013.
48. Castillo R, The METALS Study Group, Pain and PTSD Following Major Extremity Trauma, Results from the METALS study. Podium presentation, OTA annual Meeting, Phoenix, AZ, 2013
49. McClure PK, S Klinge, D Cassidy, RA Hayda, CT Born. Initial Management of Complex Ankle Injuries: The use of Emergency Department vs Operating Room External Fixation. OTA Annual Meeting, Tampa, FL, 2014.
50. Kleinhenz D, S Klinge , J Johnson, P McClure, R Hayda, C Born. “Traumatic Knee Dislocation in the Obese and Morbidly Obese from 200-2010: Increased Incidence of Vascular Intervention.” OTA Annual Meeting, San Diego CA, 2015

51. Johnson J, J Kleiner, A Goodman, J Gil, A Daniels, R Hayda. "Treatment of Femoral Neck Fractures in Patient 45 to 64 Years of Age" OTA Annual Meeting, Vancouver, CAN, 2017
52. Johnson J, A Goodman, A Haag, R Hayda. "Decreased Time to Antibiotic Prophylaxis for Open Fractures at a Level One Trauma Center" OTA Annual Meeting, Vancouver, CAN, 2017
53. Mitchell SL, Hayda R, Chen AT, Carlini AR, Ficke JR, Doukas WC, Frisch HM, MacKenzie EJ, METALS Study Group. "The Military Extremity Trauma Amputation/Limb Salvage (METALS) Study: Outcomes of Amputation vs Limb Salvage Following Major Upper Extremity Trauma", AAOS Annual Meeting, Las Vegas, NV, 2019.

SCHOLARLY WORK PUBLISHED IN OTHER MEDIA

PEER-REVIEWED

1. Hayda RA, Harris RM. "Dual C-Arm Technique of Iliosacral Screw Placement", (video) AAOS Annual Meeting, San Francisco, California, March, 2001
2. Hayda RA. "Wartime Amputation", Department of the Army Instructional Video, February, 2002
3. Hayda RA. "Assessment, Management and Decision Making in the Treatment of Polytrauma Patients with Head Injuries" OTA Resident Lecture Syllabus, 2004. revised 2006, revised 2010.
4. Hayda RA. "Principles of External Fixation" OTA Resident Lecture Syllabus, 2004. revised 2006, revised 2009.

INVITED PRESENTATIONS

1. "Orthopaedic Emergencies", 95th CSH, Heidelberg, Germany, October, 1994
2. "Common Fractures in Children", 95th CSH, Heidelberg, Germany, November, 1995
3. "Low Back Pain", 95th CSH, Heidelberg, Germany, June, 1996, January, 1997
4. "Long Bone Fracture in Multitrauma", Hospital of the University of Pennsylvania, Division of Trauma, November, 1997
5. "Rehabilitation of the Multitrauma Patient", Hospital of the University of Pennsylvania, Physical Therapy Department, December, 1997
6. "Pelvis Fractures", Swedish Course, Hospital of the University of Pennsylvania, Division of Trauma and Critical Care Symposium, February-May, 1998
7. "Musculoskeletal Injury in the Multitrauma Patient", Hospital of the University of Pennsylvania, Division of Trauma and Critical Care Nursing Symposium, May, 1998
8. "Spectrum of Retrograde Femoral Nailing", Orthopaedic Trauma Association Annual Meeting, Vancouver, Canada, October, 1998
9. "Gamma Nail, How to", Philadelphia, PA, October 31, 1998

10. "Pelvic Fractures", Trauma Refresher Critical Symposium, Wilford Hall Medical Center, San Antonio, TX November 1998, February 1999, September 1999, November 1999, February 2000, June 2000, 2001, February 2002, May 2002, August 2002, November, 2002, February 2003
11. "Blast Injury: Medical and Protective Aspects", Explosive Ordinance Disposal Brigade, February 1999
12. "Acetabular Fractures", "Ankle Fractures", Galveston Basic Fracture Course Instructor:, Galveston, Texas, October, 1999
13. "Biomechanics of Orthopaedic Implants", California Polytechnical Institute, Biomechanical Engineering Department, San Luis Obispo, California, November, 1999
14. "Periprosthetic Fractures", Faculty, Hands On Lab, OTA Annual Meeting, San Antonio, Texas, August, 2000
15. "Biomechanics and Biomaterials: Orthopaedic Perspectives", California Polytechnical Institute Biomechanical Engineering Department, March 2001
16. "Complex Elbow Injuries", Current Techniques in Upper and Lower Extremity Trauma Symposium, Austin, Texas, September, 2001
17. "Gamma Nail", OTA Residents Basic Fracture Course Lab Instructor, OTA Annual Meeting, San Diego, California, October, 2001
18. "Orthopaedic Damage Control: More than External Fixation: Pelvis and Extremities", EAST Meeting, Orlando, Florida, January, 2002
19. "Fractures and Dislocations of the Hip and Pelvis", Physical Therapy Graduate Course, AMEDD Center and School, Ft. Sam Houston, Texas, February, 2002.
20. "Plating Principles and Functions" Lab Instructor for the AO ASIF Basic Course "Orthopaedic Trauma: Team Approach to Fracture Management", San Antonio, Texas, March, 2002
21. "Femur Fractures" Institute of Surgical Research PT/OT Course, March, 2002
22. "Pilon Fractures: Current Techniques", "Delayed and Nonunion: Principles" European Operative Services Course, Nuremberg, Germany, April 2002
23. "Wartime Amputation: Current Techniques" 3rd Annual Omer Day, April, 2002
24. "Pelvic Fractures", "Major Extremity Injuries", "Spine Trauma", "Mobile Surgery", "Deployed Operations", "Battlefield Injury Patterns", Trauma Refresher Course for Surgeons, Gulhane Military Medical Academy, Ankara, Turkey, September, 2002
25. "Gamma Nail", OTA Residents Basic Fracture Course Lab Instructor, OTA Annual Meeting, Toronto, Canada, October, 2002
26. "Biomechanics of Orthopaedic Implants" California Polytechnical Institute, Biomechanical Engineering Department, San Luis Obispo, California, 2002

27. "Pelvis Fractures and Dislocations", "Acetabular Fractures", "Hip Fractures" Physical Therapy Graduate Course, AMEDD Center and School, Ft. Sam Houston, Texas, February, 2003
28. "Landmine and Blast Injury" Joint Special Operation University Medical Course, Hurlburt Field, FLA, March, 2003
29. Panelist: US Army Wartime Amputee Consensus Panel, Washington DC, March, 2003.
30. "Gamma Nail", OTA Residents Basic Fracture Course Lab Instructor, OTA Annual Meeting, Salt Lake City, Utah, October, 2003
31. "Military Blast Injuries: Acute Management and Prevention" American College of Surgeons Annual Meeting, Chicago, IL, October, 2003
32. Panelist: Operation Iraqi Freedom, Operation Enduring Freedom After Action Meeting, Colorado Springs, CO, November, 2003
33. "Biomechanics of Orthopaedic Implants" California Polytechnical Institute Biomechanical Engineering Department, San Luis Obispo, California, November, 2003
34. "Locked plating of the upper extremity: the proximal humeral plate and the small fragment LCP," San Antonio, Texas, January, 2004
35. "Pelvis Fractures and Dislocations", "Acetabular Fractures", "Femur Fractures" Physical Therapy Graduate Course, AMEDD Center and School, Ft. Sam Houston, Texas, February, 2004
36. Triservice OTA military disaster preparedness exhibit AAOS, San Francisco, CA Feb 2004
37. "AO Residents Basic Fracture Course" table instructor, Baltimore, Maryland, February, 2004
38. "Complex War Injuries of the Elbow: the BAMC Experience" Baylor Grand Rounds, Houston, TX, 2004
39. "Complex War Injuries: The Taylor Spatial Frame BAMC Experience", Taylor Spatial Frame Course, San Antonio, TX, 2004
40. "Orthopedic Injuries: Treatment Algorithms and Early Outcomes and Complications BAMC experience", 10th Annual Trauma Symposium, San Antonio, Tx, 2004
41. "Periarticular injuries: Knee and Elbow, BAMC Experience" 10th Annual Trauma Symposium, San Antonio, Tx, 2004
42. "OIF War Injuries: Early Outcomes and Clinical Challenges" ATACC, Ft Walton Beach, FL, 2004
43. "Blast Injury" OTA Advanced Disaster Medical Response Course, OTA Annual Meeting, Hollywood, FL, 2004
44. "Biomechanics and Application of Locking Plate Technology" lab instructor, OTA Annual Meeting, Hollywood, FL, 2004

45. "Gamma Nail", OTA Residents Basic Fracture Course Lab Instructor, OTA Annual Meeting, Hollywood, FL, October, 2004
46. "Biomechanics of Orthopaedic Implants" California Polytechnical Institute, Biomechanical Engineering Department San Luis Obispo, Ca, 2004
47. "Heterotopic Ossification" Orthopaedic Grand Rounds UTHSCSA, 2004
48. "Amputation: Current Principles", AMEDD Center and School Physician Assistant Program, 2005
49. Panelist "Orthopaedic Trauma Treatment Options" Clinical Orthopaedic Society Annual Meeting, San Antonio, 2005
50. "OIF War Injuries: Treatment Principles and Clinical Vignettes" Clinical Orthopaedic Society Annual Meeting, San Antonio, 2005
51. "The Scope of Segmental Bone Defects in War Injury", Extremity War Injury Symposium, Washington, DC, January 2006
52. "Pelvis Fractures and Dislocations", "Acetabular Fractures", "Femur Fractures" Physical Therapy Graduate Course, AMEDD Center and School, Ft. Sam Houston, Texas, February, 2006
53. "Overview of Combat Injury", OTA Presidential Symposium "From Iraq—Back to Iraq: Modern Combat Orthopaedics" San Antonio Trauma Symposium, San Antonio, TX, 2006
54. "Wartime Amputations", Extremity War Surgery Course, San Antonio, TX, 2006
55. "Overview of Combat Injury", OTA Presidential Symposium "From Iraq—Back to Iraq: Modern Combat Orthopaedics" Phoenix, AZ, 2006
56. "MOTR Military Orthopaedic Trauma Registry/METALS Military Extremity Trauma Amputation/Limb Salvage Database Overview" Society of Military Orthopaedic Surgeons, Honolulu, HI, 2006
57. "Principles and Techniques of Debridement" Extremity War Injuries Symposium 2, Washington, D.C. 2007
58. "Overview of Bone Stabilization Issues" Extremity War Injuries Symposium 2, Washington, D.C. 2007
59. "Blast Injury" in "Orthopaedic War Injuries from Combat Casualty Care to Definitive Treatment: A Current Review of the Basic Science, Clinical Advances, and Research Opportunities", Instructional Course Lecture, AAOS, San Diego, Feb 2007
60. "Overview of Combat Injury" in "From Iraq—Back to Iraq: Modern Combat Orthopaedics" Instructional Course Lecture AAOS, San Diego, Feb 2007
61. "Relative Stability: The Locked Plate Biology, Biomechanics and Clinical Applications" AO Basic Course, Sun Valley, 2007
62. "Olecranon and Patella Fractures" AO Basic Course, Sun Valley, 2007

63. "Preoperative Planning Lab: Templating" AO Basic Course, Sun Valley, 2007
64. "Humerus Plating: indications and Approaches", "Distal Femur Fractures: Why LISS", "Amputation of the Mangled Extremity", Moderator: Femur Fractures; AO Advanced Course, Denver, CO, 2007
65. "Special Considerations in Amputee Care: Fractures, Burns, Heterotopic Ossification, Contracture, and Humeral flexion Osteotomy" OTA Mini Symposium: Amputations; OTA Annual Meeting, Boston, MA, 2007
66. "Therapeutic Challenges of Major Limb Trauma: the War on Terror Experience," Center for Restorative and Regenerative Medicine Scientific Forum, Brown University, Providence, RI, 2007
67. "Pelvis Fractures and Dislocations", "Acetabular Fractures", "Femur Fractures" Physical Therapy Graduate Course, AMEDD Center and School, Ft. Sam Houston, Texas, March, 2007
68. "Massive Periarticular Reconstruction", Extremity War Injury Symposium 3, Washington, DC, January 2008
69. "Heterotopic Ossification: Current Concepts", Brown University Grand Rounds, October, 2008
70. "Pathophysiology/Patterns: Blast" Disaster Management and Emergency Preparedness Course, OTA Annual Meeting, Denver, CO, 2008
71. "Options and Decision Making in Complex War Injury", Moderator, OTA Annual Meeting, Denver, CO, 2008
72. "Biomechanics of Circular Fixation," "Taylor Spatial Frame Software introduction," "Tibia Fracture Lab," Taylor Spatial Frame Course, Smith and Nephew, Providence, RI, November 21,22, 2008.
73. "Military Programs/Databases: Program Status and Research Updates" Extremity War Injuries and Disaster Preparedness Symposium IV, Washington, D.C. January 22-24, 2009.
74. "Tissue Deficits from War Trauma: Implications and Opportunities" Center for Regenerative and Restorative Medicine, Brown University, Providence, RI, Feb. 2009.
75. Instructor: "Bicolumn Distal Humerus Fractures," Instructional Course Lectures, AAOS Annual Meeting, Las Vegas, NV, 2009
76. "Injury Patterns: Blast and CBRNE" Instructional Course Lectures Essentials of Disaster Management: The Role of the Orthopaedic Surgeon, AAOS Annual Meeting, Las Vegas, NV, 2009
77. "Definitive Care of War Injuries," and Trauma Cases panelist, Indiana Orthopaedic Society Annual Meeting, Ft Wayne, IN, April 24, 2009.
78. "Amputation: Advances from the Battlefield" Grand Rounds, University of Colorado, Denver, CO, May, 2009.
79. "Olecranon and Patella Fractures" and Table instructor, AO Basic Course, Cincinnati, OH, September 10-13, 2009.

80. "Simple Fracture or Life Changing Event" Trauma Care: Crucial First Steps, Warwick, RI, September 30, 2009.
81. "Critical Issues in Doctoring" panelist, Brown University, October, 2009.
82. "To Lock or Not to Lock: Current Plating Concepts." Rhode Island Orthopaedic Society, Providence, RI, November, 2009
83. "Medicine in the Military" PLME Whole Physician Program, Brown University, November, 2009.
84. "Heterotopic Ossification: Current Concepts," "Patella and Olecranon Fractures: Current Concepts," "To Lock or Not to Lock: Current Plating Concepts." New England Orthopaedic Society, Boston, MA, November, 2009
85. "Orthopaedic Care in Haiti earthquake" Framing Haiti, Brown University Teach In, February, 2010.
86. "Reflections on the Earthquake in Haiti", 2nd Congregational Church, Attleboro, MA. February 2010
87. "Injury Patterns: Blast and CBRNE" Instructional Course Lectures Essentials of Disaster Management: The Role of the Orthopaedic Surgeon, AAOS Annual Meeting, New Orleans, LA, 2010.
88. "Post-operative care, Implant removal," "Cortical and Lag screw Technique", and table instructor, AO Team Approach to Fracture Management Principles Course for Operating Room Personnel, Boston, MA, April, 2010.
89. "External Fixation," "Open Fractures," Polytrauma," Lab moderator: trimalleolar fracture" AO Principles Course, Minneapolis, MN, August, 2010.
90. "Autologous Bone Grafting 2010", OTA Mini-Symposium: Bone Graft Options. OTA Annual Meeting, Baltimore, MD, 2010.
91. "Department of Defense Orthopaedic Research Opportunities: Making sense of alphabet soup." AAOS Clinician Scientist Development Program, Rosemont, IL 2010.
92. "Amputations 2010: When, why and how," Department of Surgery Grand Rounds, Rhode Island Hospital, 2010.
93. "Disaster Systems and Principles of Care," AAOS/SOMOS symposium "Disaster Relief Orthopaedics: What you need to know before you go", AAOS Annual Meeting, San Diego, CA, 2011.
94. "Current Perspectives in Limb Salvage, Reconstruction and Amputation" Providence VA Medical Center Medical staff Meeting, Providence RI, September 2011.
95. "Complex Extremity Trauma 2011 and Beyond: Clinical Outcomes with the METALS Trial and Developing Clinical Trials with the METRC Group". Center for Regenerative and Restorative Medicine, Providence RI, November 2011.

96. "Crush Injury, Crush Syndrome and Compartment Syndrome: What is it and what to do about it" AAOS/SOMOS/OTA Disaster Response Course, Society Of Military Orthopaedic Surgeons annual Meeting, San Diego, December, 2011.
97. "Crush Injury, Crush Syndrome and Compartment Syndrome: What is it and what to do about it" AAOS/SOMOS/OTA Disaster Response Course, AAOS Annual Meeting, San Francisco, February, 2012.
98. "Trauma Lessons Learned: From Tsunami to Haiti" AAOS Symposium 2012 Disaster Relief Orthopaedics: Pearls from the Frontline, AAOS Annual Meeting, San Francisco, February, 2012.
99. "Acetabular Fractures," "Knee Dislocation and Damage Control Orthopaedics" AO Operating Room Personnel Advanced Course, Newport Rhode Island, April, 2012.
100. "Lessons Learned, Haiti Earthquake", Crush Injury, Crush Syndrome and Compartment Syndrome: What is it and what to do about it" AAOS/SOMOS/OTA Disaster Response Course, SOMOS Annual Meeting, Naples, FL, December 2012.
101. Invitee: Zimmer Trauma Expert Interactions: Advanced Case Complications Symposium, NY, December 2012
102. "Lessons Learned, Haiti Earthquake", Crush Injury, Crush Syndrome and Compartment Syndrome: What is it and what to do about it", lab instructor Critical Skills cadaver lab, AAOS/SOMOS/OTA Disaster Response Course, Chicago, IL, March, 2013.
103. Instructor, "Distal Radius Fracture" OTA Bootcamp. OTA annual Meeting, Phoenix, AZ, 2013.
104. The Evolution of Orthopaedic Trauma Care: Military and Civilian Contributions. 5th Annual Trauma Care Conference, Warwick, RI, October, 2013.
105. "Lessons Learned, Haiti Earthquake", "Crush Injury, Crush Syndrome and Compartment Syndrome:", lab instructor Critical Skills cadaver lab, AAOS/SOMOS/OTA Disaster Response Course, Vail, CO, December, 2013.
106. Fixation of proximal femur fracture without Fracture table, Stowe AO Fracture Summit, Stowe, VT, 2014
107. "Lessons Learned in Haiti: International Response", "Crush Injury, Compartment Syndrome and Fasciotomy", "Military Civilian Relations on the Hospital Ship" lab instructor Critical Skills cadaver lab, AAOS/SOMOS/OTA Disaster Response Course, Chicago, IL, March, 2014.
108. Heterotopic Ossification in Trauma and Amputation; Basic Science Focus Forum, OTA Annual Meeting, Tampa, FL, 2014
109. A Surgeons Perspective on Military Medicine. Kyiv Military Academy, Kyiv, Ukraine, 2014.
110. Extremity War Injury Care: Principles and Case Examples, Kyiv Oblast Hospital, Kyiv, Ukraine, 2014
111. Principles Of Extremity War Injury Care, Lviv Oblast Military Medical Conference, Yavoriv, Ukraine, 2014

112. 35 Year Old With A Broken Elbow, “The ER Put This Splint On Me and Told Me to Follow-Up”, 60 Year Old Male With a Broken Shoulder, “The ER Put Me In This Sling and Told Me To Follow-Up” Fundamentals Of Outpatient Adult Orthopedics, Providence Rhode Island, 2014
113. “What the Military taught me about Fracture Care”, New England Regional Fracture Summit, Stowe, VT, 2015
114. Instructor, New England Fracture Forum, 23rd annual meeting, Raynham, MA, 2015
115. “Extremity Injury in War”, “Periarticular Fracture in Extremity War Injury”, “Management of Bone Loss in Extremity War Injury”, “Principles of Amputation: War Casualties”. Mechnikov Hospital, Dnipropetrovsk, Ukraine, 2015
116. “Periarticular Fractures in Extremity War Injury,” “Management of Bone Loss in Extremity War Injury”, Kyiv Regional Orthopaedic Trauma Conference, "Modern tactics of medical aid for combat wounds and open fractures of the limbs. Obtained experience", Kyiv, Ukraine, October 2015.
117. Panelist and Moderator “Meet the Multidisciplinary Rehabilitation Team,” “Rehabilitation of the Injured Soldier” Physical Rehabilitation in Ukraine: New Model, International Standards, Efficient Practice, Ukrainian Catholic University, Lviv, Ukraine, November, 2015.
118. “Fractures and Injuries around the knee” Fundamentals Of Outpatient Adult Orthopedics, Providence Rhode Island, 2015.
119. Moderator, “Readiness of the Fighting Force” Extremity War Injury Symposium XI “Maintaining Force Readiness during an Era of Military Transition”, Washington DC. 2016
120. Small group discussion leader: “Compartment Syndrome” Extremity War Injury Symposium XI “Maintaining Force Readiness during an Era of Military Transition”, Washington DC. 2016
121. “Pilon Fractures: Strategies for 2016”, “Patella Fractures: Tension Band vs Plating vs Partial Patellectomy”, “Nonunion of Proximal Femur Fractures” Contemporary Topics in Orthopaedics, Maine Orthopaedic Society Annual Meeting, Sugarloaf Maine, 2016.
122. “Fungal Osteomyelitis” Masters of Disaster, Baltimore Limb Deformity Course, Baltimore, MD, 2016.
123. Moderator: “Tactical Medicine/Intentional Violence/Disaster Preparedness” EWI XII (Extremity War Injury Symposium): Homeland Defense as a Translation of War Lessons Learned” Washington DC. 2017
124. “Testimonial: Haiti Earthquake 2010: Project Medishare and USNS Comfort,” Extremity War Injury Symposium, Washington DC, 2017.
125. “Hip Fractures: Challenges and Solutions: the Geriatric Hip Fracture Program”, Lifespan Emergency Medicine Department Grand Rounds, 2017
126. “Complex War Injury: Lessons shared from care of US combatants”, Ukrainian Medical Association of North America, Washington D.C. 2017

127. “Disaster Preparedness for Orthopedics: Current state and way forward”, National Orthopaedics Leadership Conference, AAOS, Washington D.C., June, 2018.
128. “Lower Extremity Stabilization and Disaster Preparedness” ICL: Overcoming Obstacles in Volunteerism, American Society for Surgery of the Hand Annual Meeting, Boston, MA, September, 2018.
129. “Orthopaedic Trauma: 10 years...10 changes” Rhode Island Trauma Center 10th Annual Conference, Warwick, RI, October, 2018.
130. “Mass Casualty and Domestic War Game Scenarios” Symposium Domestic Mass Casualty and Disaster: Coming to Your Area, OTA Annual Meeting, Orlando, FL, October, 2018.
131. “What Works, What Does Not Work: Domestic Scenarios Lessons Learned” AAOS Presidential Symposium: Domestic Mass Casualty and Disaster: Coming to your Area. AAOS Annual Meeting, Las Vegas, NV, March 2019.

GRANTS

METALS (Military Extremity Trauma Amputation and Limb Salvage Study) Multicenter study Co-investigator, Military Amputee Research Program grant # W81XWH-06-0361 (congressional funding) administered through John Hopkins University, 2005-2014; \$1,169,339; study initiator, designer, and co-investigator in multi-institutional study

UNIVERSITY and HOSPITAL TEACHING, ADVISING and MENTORING ROLES

Orthopaedic Trauma Division: 2008-present

As Director and previously Co-Director of the Orthopaedic Trauma Division it was my responsibility with my partner to assure the appropriate education in orthopaedic trauma to residents of all levels and fellows. Medical students rotating on service are also exposed to this teaching. Through formal lectures, journal club and informal teaching during conference during rounds, in the operating room, ward rounds or clinic and other venues, pertinent anatomy, biomechanics, basic science with diagnostic, treatment and management of complications of simple and complex fractures are covered.

Daily Board rounds with PG1,2,3,5 residents and Tufts PG4 resident: review of new and active current patients with discussion

Monthly Quality Improvement with Morbidity and Mortality review

Biannual multidisciplinary quality review with General Surgery, Anesthesia and other specialties as needed

Resident orthopaedic trauma lecture series: at least 2 formal presentations per year with oversight of all fellow presentations

Anatomy Lab pelvis moderator

Basic Science lectures on fracture healing, nonunion and augmentation

Emergency Medicine rotators ad hoc

Orthopaedic Trauma Fellowship: Co Director 2008-2016; Director 2016-present

Daily case review and supervision in operating room and clinic

Journal club 6 per annum

Annual program review

Mentees: See attached list of 62 graduated fellows since 2008

Bryant University Physician Assistant Rotators: 1 per month 2017-present

Brown University Undergraduate and Medical School observers/mentees: Henry Fox, Joey Gu, David Decker, Adam Eltorai, Nathan Thomas and others

International Observers: Oleksii Goregliad, MD, Dnipro, Ukraine, April, May 2016
Isaac Chartelin, MD, Port Au Prince, Haiti, October-November 2016

University discussion panels:

- “Critical Issues in Doctoring” panelist, Brown University, October, 2009. 20-30 students
- “Medicine in the Military” PLME Whole Physician Program, Brown University, November, 2009. 20-30 students
- “Orthopaedic Care in Haiti earthquake” Framing Haiti, Brown University Teach In, February, 2010. 40-60 students

Other teaching: Wheeler School, Princeton Public High School, Gordon Middle School Medicine Interest group discussion on Orthopaedic 2010-present. Discussed pathways to medicine and orthopaedic surgery. In this context we discuss several examples of injuries and the possible methods of achieving recovery.