2021 SOMSA ABSTRACTS

2021 Scientific Assembly
Research Award Winners and Presentations

BEST ORAL ABSTRACT
Strategy to Avoid Excessive Oxygen (SAVE-O2) for Critically Ill Trauma Patients: A Multicenter Clinical Trial to Define Oxygen Requirements for Combat Casualty Care
David J. Douin, MD1; Erin L. Anderson, RN1; MAJ Steven G. Schauer, DO, MS3; John Rice, PhD2; Layne Dylla, MD, PhD1; Conner Jackson, MS2; Alex Cheng, PhD5; Col Vikhyat S. Behbata, MD1,4,6; Adit A. Ginde, MD, MPH1,6
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5 Vanderbilt University Medical Center, Nashville, TN
6 Center for COMBAT Research, University of Colorado School of Medicine, Aurora, CO

Background: Recent evidence supports targeting normoxia (SpO2 90-96% or PaO2 60-100mmHg) to avoid hyperoxia. Our objective is to determine the feasibility, safety, and effectiveness of targeted normoxia to conserve oxygen and improve clinical outcomes in critically injured patients.

Methods: This prospective multicenter clinical trial will enroll critically ill trauma patients at eight level 1 trauma centers in the United States (NCT0434959). We will follow patients from emergency department through hospital discharge or to day 90 – whichever comes first. Each hospital will contribute pre-implementation (control) and post-implementation (intervention) data. The start of the intervention period will be defined by randomized timing in a stepped wedge cluster randomized controlled trial design. All sites will begin in the control phase with usual care. When sites reach their randomly assigned time to transition, there will be a one-month training period, which does not contribute to data collection. Following the one-month training period, the site will remain in the intervention phase for the duration of the trial. The primary outcome is supplemental oxygen free days, defined as number of days alive and not on supplemental oxygen.

Results: The Colorado Multiple Institutional Review Board, the Single IRB for this trial, approved with a determination of minimal risk. This was subsequently approved by the Human Research Protections Office with the same determination. Vanderbilt University is serving as the data coordinating center. As of November 30, 2020, one site has transitioned into the intervention phase. The next site transition will occur on January 15, 2021. Preliminary results will be available for the 2021 SOMA conference.

Discussion/Conclusion: We hypothesize that targeted normoxia will safely reduce the need for concentrated oxygen. These data will inform military stakeholders on oxygen requirements for critically injured warfighters, while reducing logistical burden in prolonged combat casualty care.

BEST POSTER ABSTRACT
MATV Storage of Blood Products During Long Duration Operations
MAJ(P) Dan Brillhart, MD FACEP, Emergency Physician (1); CPT Erick Thronson, BSN, RN, CEN, CFRN, Trauma Nurse (1); SO2 Kyle Najar, Paramedic, SOTM, SEAL Team EIGHT, Virginia Beach, VA; SO1 Paul Pelaez, SOTM, NRP, FP-C, SEAL Team FOUR, Virginia Beach, VA; SO1 Michael Stephens, SOCM, SEAL Team TWO, Virginia Beach, VA; CPT Mackenzie Schimpt, MD, Emergency Medicine Resident, Darnall Army Medical Center (1) Expeditionary Resuscitative Surgical Team 6, Special Operations Command - Africa

Background: Current Joint Trauma System (JTS) Clinical Practice Guidelines (CPG) recommend blood administration within 36 minutes of injury, presenting logistical challenges in the far-forward environment. Insulated transport containers and fresh whole blood field transfusion protocols such as Ranger O Low Titer (ROLO) were developed to mitigate these challenges. These protocols, however, rely on having enough type O personnel with recent low antibody titers to serve ROLO donors and insulated transport containers cannot maintain temperatures for long operations.

Methods: A FridgeFreeze portable refrigerator unit containing whole blood was carried in the bed of an M-ATV. It was plugged into the vehicle’s onboard 120V power supply augmented by a marine backup battery to maintain refrigeration during periods when the vehicle was turned off. After extensive rehearsals and trial runs, the setup was fielded on a 10-day operation in East Africa.

Results: The 15 L device maintained 13 units of whole blood within storage temperature range. This location had daytime high temperatures of 88-90 F. Temperature checks were performed a minimum of every 6 hours and ranged from 3.1-6.0 degrees Celsius, never coming out of the appropriate temperature range. The device also survived damage from a large IED blast, yet continued to function until mission completion 3 days later.

Conclusion: The FridgeFreeze portable refrigerator unit is a practical solution to storing whole blood over prolonged periods in an austere environment. On long-duration mounted operations, the onboard power inverters plus battery backups make the storage of blood products a viable option for the length of the blood’s usable life. Solutions such as this would allow for fully tested whole blood to be available to meet CPG goals and avoid the need to perform fresh whole blood field transfusions which may be logistically and tactically challenging.

2021 SCIENTIFIC ASSEMBLY RESEARCH PRESENTATIONS
More Sophisticated Than a Drink Cooler or an Old Sphygmomanometer, but Still Not Adequate for Prehospital Blood – A Market Review of Commercially Available Equipment for Prehospital Blood Transport and Administration
Silver M Martin, MSc, MS2, Battlefield Airway Research Intern, US Army Institute of Surgical Research, JBSA Fort Sam Houston, Texas, Doctoral Candidate, University of the Incarnate Word School of Medicine, San Antonio, Texas; Major Andrew D Fisher, MD, MPAS, Resident Physician, Department of Surgery, University of New Mexico School of Medicine, Albuquerque, New Mexico, Texas Army National Guard, Austin, Texas; Michael A Meledeo, PhD, Research Scientist; James Bynum, PhD, Chief, Coagulation and Blood Research, US Army Institute of Surgical Research, JBSA Fort Sam Houston, Texas; Major Michael D April, MD, DPhil, MSc, Chief, Emergency Medicine Service Brooke Army Medical Center, JBSA Fort Sam Houston, Texas;
Analysis of Epidemiology, Capabilities and Outcomes of Small Surgical Teams
Col Stacy Shackelford, MD, Joint Trauma System Chief, San Antonio, TX; Dr. Caryl Stern, PhD, Joint Trauma System Chief of Epidemiology, San Antonio, TX;Lt Col Andrew Hall, MD, General Surgeon, Eglin Air Force Base, FL; LTC Linda Benavides, MD, General Surgeon, Madigan Army Medical Center, WA; CPT Jeffery Conner, MD, General Surgery Resident, Madigan Army Medical Center, WA; Maj Erik Desoucy, DO, Trauma and Critical Care Fellow, Brooke Army Medical Center, San Antonio, TX; Maj Remealle How, MD, Trauma Performance Improvement Director, Brooke Army Medical Center, San Antonio, TX; LTC Peter Kreishman, MD, General Surgeon, Madigan Army Medical Center, WA; Lcdr Blair Lee, MD, General Surgery Resident, Naval Medical Center Portsmouth, VA; Maj Marc Northern, MD, Special Operations Surgical Team Detachment 1 Commander, Birmingham, AL; LTC Bradley Rittenhouse, MD, Trauma and Critical Care Surgeon, Landstuhl Regional Medical Center, Germany; COL Sandra Wanek, MD, Deputy Commander of Professional Services, 396th Combat Support Hospital, WA; COL Jennifer Gurney, MD, Defense Committee on Trauma Chair, Joint Trauma System, San Antonio, TX; COL Jay Baker, MD, Special Operations Command Europe, Command Surgeon, Stuttgart, Germany

Point-of-Care Ultrasound Use by EMS Providers in Out-of-Hospital Cardiac Arrest
ENS Michael Kreiser OMS-II; 2LT Brianna Hill OMS-II; 2d Lt Dikkhya Karki OMS-II; 2d LT Elke Wood OMS-II; Rocky Vista University College of Osteopathic Medicine, Parker, CO; Isain Zapata PhD, Assistant Professor, Department of Biomedical Sciences, Rocky Vista University, Parker, CO; COL Retd USAMC Anthony J. LaPorta MD, FACS, FACOS(H), Department of Defense Health Board Committee on Trauma and Injury and Professor of Surgery and Military Medicine, Rocky Vista University, Parker, CO; Ryan Shelton MPS, NSTEMI-P, Paramedic Lieutenant and Training Lieutenant; Jodi Peterson BA, EMS Clinical Services Director and EMS Supervisor, South Metro Fire Rescue, Centennial, CO; John Riccio MD, Medical Director, South Metro Fire Rescue and Centura Prehospital Services, Centennial, CO; Paul Khalil MD, Assistant Professor and Assistant Director of Pediatric Emergency Medicine POCUS, Department of Pediatrics, University of Louisville/Norton, Children’s Hospital, Louisville, KY; Toney Amanda MD, Assistant Professor/Director of Pediatric Emergency Ultrasound and Pediatric Emergency Medicine Physician, University of Colorado/Denver Health Medical Center, Denver, CO

A Sequential Bayesian Mass Transfusion Decision Scheme for Blunt Trauma: Incremental value of ABC Score Shock Index and Lactate.
Amado Alejandro Báez MD, MSc, MPH; Nathan Harris MS4; Patrick Loeffler MD, Medical College of Georgia, Center of Operative Medicine

A Direct Comparison of Two Simplified Neuro-Assessment Scores to the Glasgow Coma Scale for Appropriate Field Activation of Trauma Resources
Capt Matthew M. Gangidine, MD, USAF, MC, FS (EMS/Research Fellow, Staff Emergency Medicine Physician), Department of Emergency Medicine and Paramedic Division; Steven Hulac, BS, EMT-P (Captain for Quality Management), Paramedic Division; Taylor McCormick, MD, MSc (Staff Emergency Medicine Physician), Department of Emergency Medicine; Eric Campion, MD (Trauma and Acute Care Surgeon), Department of Surgery; Jason Haakos, MD, MSc (Director for Research, Staff Emergency Medicine Physician), Department of Emergency Medicine; all from the Ernest E. Moore Shock Trauma Center at Denver Health Medical Center, Denver, CO

Change My Mind: Special Operations Medics Should Carry Paralytic Drugs
CPT Tyler Hummel, DO, Emergency Medicine Resident, Carl R. Darnall Army Medical Center Department of Emergency Medicine, Fort Hood, TX; LTC Dan Brillhart, MD FACEP, Emergency Physician, Expeditionary Resuscitative Surgical Team 6, Special Operations Command – Africa; SO1 Jacob Bax, SOCM, Lead Medic SO2 Mitchell Zware, SOCM - SEAL Team EIGHT, Virginia Beach, VA

2021 SOMSA Abstracts
Austere Fasciectomy: Alternative Equipment for Performance in the Field
Maj Erik DeSoucy, DO, USAF, MC, SFS, Department of Trauma Surgery, Brooke Army Medical Center JBSA Fort Sam Houston, TX; Maj Christopher Hewitt, DO, USAF, MC, SFS Department of Emergency Medicine, USAF, Brooke Army Medical Center, JBSA Fort Sam Houston, TX; Scotty Bolleter, BS, EMT-P Chair, Centre for Emergency Health Sciences Healthcare Innovations and Sciences Centre, Spring Branch, TX

Special Forces Medics Should Have Intranasal Medication Administration Capability
CPT Evan Stern, MD, Emergency Medicine Resident, PGY-1, Carl R. Darnall Army Medical Center, Fort Hood, TX; MAJ(P) Dan Brillhart, MD FACEP, Emergency Physician, Expeditionary Resuscitative Surgical Team 6, Special Operations Command – Africa; SO2 Kyle Najer & SO2 Matt Devorin, SOTM, SEAL Team EIGHT, Virginia Beach, VA

In-Theater Assessment and Training of Resuscitative Balloon Occlusion of the Aorta
CPT Kyle Couperus, MD, RN, Emergency Physician, United States Army, Joint Base Lewis-McChord, WA; MAJ Thomas Kwolek, RN, Critical Care Nurse, United States Army, 30th Medical Brigade, Germany; ILT Jamie Eastman, RN, Critical Care Nurse, Vermont Army National Guard, Colchester, VT; MAJ Kelly Green, RN, Emergency Nurse, United States Army, Virginia; COL (Ret.) Kyle Remick, MD, Trauma Surgeon, Uniformed Services University School of Medicine, Maryland

Special Operations Clinical Training at a Civilian Academic Medical Center during the COVID-19 Pandemic
Daniel Grabo, MD, Associate Professor of Surgery, West Virginia University, Morgantown, WV; Ashley Brunley, BS, Lab Technician, Fresh Tissue Training Program, WVU Critical Care and Trauma Institute Morgantown, WV; Josh Bombard BS, Graduate Research Assistant, West Virginia University Morgantown, WV; Kamil Abbas, Undergraduate Research Assistant, West Virginia University Morgantown, WV; Alison Wilson, MD, Professor of Surgery, West Virginia University, Morgantown, WV

First Hand Experience: A SOF Patient and His SOF Medics Detail an Evacuation from East Africa
SO1 Chandler Wright, Patient; SO1 Jacob Bax, SOCM, Senior Medic; SO2 Kyle Najer, Paramedic, SOTM; SO2 Matt Devorin, SOTM; SO2 Mitchell Zwade, SOCM, SEAL Team EIGHT, Virginia Beach, VA; LTC Dan Brillhart, MD FACEP, Emergency Physician; CPT Erick Thronson, BSN, RN, CEN, CFRN, Trauma Nurse Expeditionary Resuscitative Surgical Team 6, Special Operations Command - Africa

Multisite Randomized Clinical Trials on Sustained Acoustic Medicine for the Treatment of Musculoskeletal Injuries: Two Hundred and Ninety-Eight Patient Cohort Analysis
George Lewis, President/CEO, Zetroz Biosystems LLC

Mireya A. Escandon, BS (1); Brandon Carius, DSc, MPAS (1,2); Lauren Reeves, MS (5); Krystal Bean, DVM, (1); MAJ Steven G. Schauer, DO, MSCR (1,3,4)

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4. Uniformed Services University of the Health Sciences, Bethesda, Maryland, USA
5. 59th Medical Wing, JBSA Lackland, Texas, USA

An Analysis of Prehospital Administration of Blood Products to Pediatric Casualties in Iraq and Afghanistan
Ryan S. Lauby, Research Assistant; Sarah A. Johnson, Research Assistant, USAISR, JBSA Fort Sam Houston, TX; Mathew A. Bergman LTC, MD, Brooke Army Medical Center, JBSA Fort Sam Houston, TX; Uniformed Services University of the Health Sciences, Bethesda, Maryland; James Bynum, PhD, USAISR, JBSA Fort Sam Houston, TX; Guyon J. Hill, LTC, Carl R Darnall Army Medical Center, Fort Hood, TX; Steven G. Schauer MAJ, DO, MS, USAISR, JBSA Fort Sam Houston, TX; Brooke Army Medical Center, JBSA Fort Sam Houston, TX; Uniformed Services University of the Health Sciences, Bethesda, MD

Treatment of Wound Infection Using Omadacycline Versus Linezolid: Pooled Results From Phase 3 Randomized, Double-Blind, Multicenter Studies (OASIS-1 And -2)
Kelly Wright, PharmD, BCPS; Dina Bessee, PharmD; Surya Chitra, PhD, MBA; Amy Manley, BS, Paratek Pharmaceuticals, King of Prussia, PA

Carotid Arterial Occlusion
Utilizing a Cadaver Flow Simulation Model
Jeffrey S. Williams, LtCol, DO, FACOS, Plastic, Hand and Craniofacial Surgery, ARC Trauma, LLC; Lauren Edmonson, Lt., BSAH, MS1, AEMT, ARC Trauma, LLC; Austin J. Ballentine, BSME, Flow Dry Technology and ARC Trauma, LLC; Caleb T. Williams, BSME, ARC Trauma, LLC; Joseph Agoston, BS Biology, BS Circulation Technology, CCP (Certified Clinical Perfusionist), Medtronic; Melissa K. Burns, MD, Emergency Medicine, Anatomy, Cedarville University; Timothy L. Norman, PhD, Mechanical and Biomedical Engineering, Cedarville University and ARC Trauma, LLC

Hypothermia Management, an Evaluation of a Novel Lightweight System
Philippa Caine BSc (Hons), Final Year Medical Student Liverpool, UK; Mark Taylor, PhD, Research Fellow, University of Leeds, UK; Colin Smart BSc (Hons), Partner - TSG Associates LLP, Retired Sargent RAMC, Medical Support Unit Medic 22 SAS; Simon E Pennells BSc., V.P. Operations, Kingfisher Medical, Columbus OH; John Hall MBE, FIMC RCS Ed., Hon. Senior Clinical Lecturer, University of Birmingham, UK

S.T.A.T. vs. CAT: A Pilot Comparison after a Video Demonstration
CPT Brandon M Carius, DSc, MPAS, Brooke Army Medical Center, JBSA Fort Sam Houston, TX; 121 Field Hospital, Camp Humphreys, Republic of Korea; Ashley D. Tapia, BS; Nguvan Uhaa, BS, LVN; Sarah A. Johnson; Camaren M. Cuenca; Ryan S. Lauby, US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX; MAJ Steve G. Schauer, DO, MS Brooke Army Medical Center, JBSA Fort Sam Houston, TX; US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX; Brooke Army Medical Center, Fort Hood, TX; MAJ Steve G. Schauer, DO, MS, US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX; US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX; Uniformed Services University of the Health Sciences, Bethesda, MD; 59th Medical Wing, JBSA Lackland, TX

Incidence of Post-traumatic Seizures in Children During Combat Operations in Afghanistan and Iraq
Camaren M Cuenca, US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX; LTC Matthew A Borgman, MD, Brooke Army Medical Center, JBSA Fort Sam Houston, TX; MAJ Bradley A Dengler, MD, Department of Neurosurgery, Walter Reed National Military Medical Center, Bethesda, MD; MAJ Steven G Schauer, DO, MS, US Army Institute of Surgical Research, JBSA Fort Sam Houston, TX; Brooke Army Medical Center, JBSA Fort Sam Houston, TX; Uniformed Services University of the Health Sciences, Bethesda, MD
Learning Cyber-Physical Models of Resuscitation
Mayra Melendez, Graduate Student, Autism Lab, School of Computer Science, Carnegie Mellon University, Pittsburgh, PA; Michael R. Pinsky, MD, Professor, Department of Critical Care Medicine, School of Medicine, University of Pittsburgh, Pittsburgh, PA; Joo Yoon, MD, Fellow, Department of Critical Care Medicine, School of Medicine, University of Pittsburgh, Pittsburgh, PA; Gilles Clermont, MD, Professor, Department of Critical Care Medicine, School of Medicine, University of Pittsburgh, Pittsburgh, PA; Arthur Dubrawski, PhD, Professor, Autism Lab, School of Computer Science, Carnegie Mellon University, Pittsburgh, PA

Epidemiology of Ankle Sprain in the Military: A Systematic Review of Literature
Allison Goodrich, BA, Medical Student 1; Brandon Lee Morris, MD, Civilian Physician 2; Christina Anna Hermanns, BS, Medical Student 1; Ashley Ann Herda, PhD, Professor/Researcher 1; Armin Tarakeme, BA, Research Assistant 1; Bryan George Vopat, MD, Civilian Physician 1
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Retrospective Review of Neuroendocrine Dysfunction among National Intrepid Center of Excellence (NiCoE) Intensive Outpatient Program (IOP) Patients
LT Rachael Campbell, MD, Internal Medicine Intern, Naval Medical Center San Diego, San Diego CA; ENS Bryson Hewins, BS, MS2 USUHS SoM, Bethesda MD; Sara Lippa, PhD, ABPP, Senior Research Investigator, NiCoE, WRNMMC, Bethesda MD; LTC Kent Werner, MD, PhD, Assistant Professor, Department of Neurology, USUHS, Director of Research, WRNMMC Sleep Disorders Center, Bethesda MD; Dr. Kimbra Kenney, MD, Professor, Neurology, USUHS, Service Chief, Research Operations, NiCoE, WRNMMC, Bethesda MD

Feasibility of Obtaining Intraosseous and Intravenous Access Using Night Vision Goggle Focusing Adaptors
Eric Koch, LCDR, USN, Emergency Medicine Resident; Alexander Iten, LT, USN, Emergency Medicine Resident; Amanda Wojnial, LT, USN, Emergency Medicine Resident; Amy Hildreth, LCDR, USN, Emergency Medicine Staff; Combat Trauma Research Group West, Naval Medical Center San Diego, San Diego, CA; Sherri Rudinsky, CAPT, USN, Uniformed Services University of the Health Sciences, Military and Emergency Medicine Department; Travis Deaton, CAPT, USN, 1st Marine Division, I MEF; Greg Zarow, PhD, Combat Trauma Research Group West, Naval Medical Center San Diego, San Diego, CA; The Emergency Statistician, Idyllwild, CA

Practice Advancement: Resuscitative Endovascular Balloon Occlusion of the Aorta at the Point of Injury
CPT Tyler Miklovic, MD, Emergency Medicine Resident, Carl R. Darnall Army Medical Center, Fort Hood, TX; MAJ(P) Dan Brilli-hart, MD FACEP, Emergency Physician, Expeditionary Resuscitative Surgical Team 6, Special Operations Command, Africa; SO1 Jacob Bax, SOTM, SEAL Team EIGHT, Virginia Beach, VA; John McCarley, Former PJ, Aevex Aerospace, San Diego, CA

Development of a Death Classification System for Conducting Combat-Relevant Research in Civilian Populations
Nee-Kofi Mould-Millman, MD1; Lina V. Mata, MD1; Chandni Patel, BPH1; Shaheem de Vries, MBChB, MPhil2; Hendrick J. Lategian, MBChB3; Julia Dixon, MD, MPH1; MAJ Alexander Be-dard, MD1; MAJ Steve Schauer, DO, MS4; Col. Cord Cunningham, MD, MPH5; COL Tyson E Becker, MD, MPH6; Ernest E. Moore, MD1,7; Col. Vikhyat Bebarta, MD1; and Adit A. Ginde, MD, MPH1

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Epidemiology and Outcomes of Combat-Relevant Prolonged Trauma Care (EpiC): A Prospective International Multicenter Study
Nee-Kofi Mould-Millman, MD1; Lina V. Mata, MD1; Chandni Patel, BPH1; Shaheem de Vries, MBChB, MPhil2; Hendrick J. Lategian, MBChB3; Julia Dixon, MD, MPH1; MAJ Alexander Be-dard, MD1; MAJ Steve Schauer, DO, MS4; Col. Cord Cunningham, MD, MPH5; COL Tyson E Becker, MD, MPH6; Ernest E. Moore, MD1,7; Col. Vikhyat Bebarta, MD1; and Adit A. Ginde, MD, MPH1

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A Descriptive Analysis of Battlefield First Responder and Combat Lifesaver Interventions During the Role 1 Phase of Care
CPT Matthew W. Paulson, BA, Medical Student (1, 2); John D. Hesling, BS, Medical Student (1, 2); MAJ (Ret) Jerome T. McKay, PhD, USA, CU Anschutz Center for COMBAT Research Program Manager (2); Col Vikhyat S. Bebarta, MD, USAF, CU Anschutz Center for COMBAT Research Director/Emergency Medicine Physician/Professor (2, 3); Brig Gen Kathleen Flarity, DNP PhD, USAF, CU Anschutz Center for COMBAT Research Deputy Director/Mobilization Assistant to the Command Surgeon/Associate Professor (2, 4); COL (Ret) Sean Keenan, MD, USA, CU Anschutz Center for COMBAT Research Assistant Director/Emergency Medicine Physician/Professor (2, 3, 4); LTC Jason F. Naylor (6); MAJ Andrew D. Fisher, MD, LP, Resident Physician (7,8); MAJ Michael D. April, MD (9); MAJ Steven G. Schauer, DO, MS, USA, Emergency Medicine Physician (3, 10, 11, 12)

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8 Department of Surgery, University of New Mexico School of Medicine, Albuquerque, NM
9 2nd Stryker Brigade Combat Team, 4th Infantry Division, Fort Carson, CO
Lessons Learned During Prolonged Care of Combat Casualties by a Minimally Manned Surgical Team.
LTC Richard Lesperance, MD FACS, Brooke Army Medical Center, Fort Hood, TX; LTCOL Steven Adamson, MD FRACGP, Directorate of Army Health, Australian Army Headquarters, Canberra, ACT, Australia; COL Jennifer Gurney, MD FACS, US Army Institute of Surgical Research, San Antonio, TX

Practice Makes Perfect: Integration of Hoist Operations into Trauma Lanes in the Deployed Setting
CPT Jessica Eker, MD, Emergency Medicine Resident, Carl R. Darnall Army Medical Center Department of Emergency Medicine, Fort Hood, TX; SO2 Matt Devorin, SOTM, SEAL Team EIGHT, Virginia Beach, VA; MAJ(P) Dan Brillhart, MD FACEP, Emergency Physician, Expeditionary Resuscitative Surgical Team 6, Special Operations Command – Africa; CPT Erick Thronson, BSN, RN, CEN, CFRN, Trauma Nurse, Expeditionary Resuscitative Surgical Team 6, Special Operations Command – Africa

Mass Casualty Preparations on Mounted Operations: A Solution from East Africa
MAJ(P) Dan Brillhart, MD FACEP, Emergency Physician, Expeditionary Resuscitative Surgical Team 6, Special Operations Command – Africa; CPT Erick Thronson, BSN, RN, CEN, CFRN, Trauma Nurse, Expeditionary Resuscitative Surgical Team 6, Special Operations Command – Africa; CPT Shane Farley, DO, Carl R. Darnall Emergency Medicine Resident, Fort Hood, TX; SO2 Matt Devorin, SOTM, SEAL Team EIGHT, Virginia Beach, VA

Proof of Concept: Orthopaedic Simulation Training
2LT Joshua Hansen; 2d Lt Austin McDonald; 2d Lt Austin Rasmussen; 2d Lt Corbin Lee; ENS Bryson Hewins, Medical Students, USUHS, Bethesda MD; MAJ Brenton Franklin MD, Assistant Professor of Surgery, USU/Walter Reed National Military Medical Center; LtCol Robert McGill MD, Chief, Orthopaedic Surgery and Podiatry, Fort Belvoir Community Hospital; CAPT (ret) Joseph Loprestato MD, MPH, CHSE-A, Associate Dean for Simulation Education, USUHS, Bethesda, MD

Helicopter Crashes in the Deployed, Combat Setting: The Department of Defense Trauma Registry Experience
CPT Joseph W. Jude, MD, Emergency Medicine Resident (1); CPT Adam M. Spanier, MD, Emergency Medicine Resident (1); CPT Hugh Hiller, MD, Staff Physician (1); CPT Wells Weymouth, MD, Flight Surgeon (2); COL Cord Cunningham, MD, Staff Physician (1); LTC(P) Guyon J. Hill, MD, Staff Physician (1); MAJ Steven G. Schauer, DO, Staff Physician (3,4)
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4 Brooke Army Medical Center, JBSA, TX

Albumin as a Blood-Sparing Resuscitation Fluid in Austere Environments
CPT Sam Lloyd, MD, Emergency Medicine Resident, Carl R. Darnall Army Medical Center, Fort Hood, TX; SO2 Kyle Najjar, Paramedic, SOTM, SEAL Team EIGHT, Virginia Beach, VA; CPT Erick Thronson, BSN, RN, CEN, CFRN, Trauma Nurse; MAJ(P) Dan Brillhart, MD, FACEP, Emergency Physician, Expeditionary Resuscitative Surgical Team 6, Special Operations Command - Africa

The COVID-19 Army Rapid Assessment Tool (CARAT) for Management of COVID-19 in the Deployed Setting
LTC Michael J. Walters, MD (general surgeon)-1; COL Maurice L. Kliewer, MD (DCSS)-1; CPT Elizabeth M. Mannion, MD (emergency medicine physician)-1; LTC Angela L. Smith, DNAP, CRNA (CRNA)-1; LTC Henry R. Teplicki, MSN (OIC ICU/ICW)-1; COL Christopher W. Honea, RN (DCN)-1; CPT Chuck A. Venale, MSN, AG-ACNP (NP)-1
3D MCDS (Kuwait); LTC Brandon L. Aden, MD, MPH (physician)-2; LTC Charles L. Bruehl, MD, PhD (Chief of Professional Services)-2; CPT Mohit Sachdeva, PhD (theater microbiologist)-2; COL Donna E. Ward, MSN, CRNA (Chief nurse)-2; COL Stephanie A. Wolloff, DNS, APRN (DCOS)-2; MAJ Adam D. Clark, MHS, PA-C (company commander)-3
1 411th Hospital Center FWD (Camp Arifjan, Kuwait)
2 3D MCDS (Kuwait)
3 230th Brigade Support BN, 30th ABCT

A Prospective, Feasibility Assessment of a Novel, Disposable Video Laryngoscope with Special Operations Medical Personnel in a Mobile Helicopter Simulation Setting
Jessica Mendez, BS (1); Nguyen Uhaa, LVN (1); MAJ Iain L. Hudson, DO, MPH (1, 2); CPT Wells L. Weymouth, MD (5); MAJ Steven G. Schauer, DO, MS (1, 2, 3, 4)
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Emergent Resuscitative Thoracotomy and REBOA Kit for Point-of-Injury Care.
CPT(P) Dallin Mitchell, DO, Emergency Medicine Resident, Darnall Army Medical Center; CPT Erick Thronson, BSN, RN, CFRN, Trauma Nurse, Expeditionary Resuscitative Surgical Team 6, Special Operations Command - Africa; SO2 Kyle Najar, Paramedic, SOTM, SEAL Team Eight, Virginia Beach, VA; MAJ(P) Dan Brillhart, MD FACEP, Emergency Physician, Expeditionary Resuscitative Surgical Team 6, Special Operations Command - Africa

CPT Anthony Netzel, DO, Emergency Medicine Resident, Carl R. Darnall Army Medical Center, Fort Hood, TX; MAJ(P) Dan Brillhart, MD FACEP, Emergency Physician, Expeditionary Resuscitative Surgical Team 6, Special Operations Command - Africa; SFC Christopher Holley, 18D, Senior Medical Sergeant, 7th Special Forces Group; CPT Evan Torline, MD, Battalion Surgeon, 7th Special Forces Group, Elgin AFB, FL

Austere Resuscitation of Delayed-Presentation Head Trauma in a Pediatric Patient: A Case Report From East Africa
MAJ(P) Dan Brillhart, MD FACEP, Emergency Physician, Expeditionary Resuscitative Surgical Team 6, Special Operations Command - Africa; CPT Erick Thronson, BSN, RN, CEN, CFRN, Trauma Nurse, Expeditionary Resuscitative Surgical Team 6, Special Operations Command – Africa; LTL Kai Norbeck, MS4, Edward Via College of Osteopathic Medicine, Blacksburg, VA

The Sick Call Bag: A Packing List for Disease and Non-Battle Injury
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DCR and NSW Integration
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Implementing an Ultrasound Guided Peripheral Intravenous Pathway for Difficult Access Patients in the Emergency Department
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Novel Detection and Treatment Devices for Life-Threatening Subdural Hemorrhage in Prolonged Field Care Settings
Carissa Rodriguez, PhD; Kevin Wolfe, PhD; Michael Fitch, Max Basescu; Tim Sleasman, PhD; Jared Wormley; David Blodgett, PhD, Johns Hopkins University Applied Physics Laboratory, Laurel MD; Adam Cohen, MD, Johns Hopkins University Applied Physics Laboratory, Department of Neurology, Johns Hopkins School of Medicine, Baltimore MD; David L. Brody, MD, PhD, The Center for Neuroscience and Regenerative Medicine, Uniformed Services University of the Health Sciences and National Institutes of Health, Department of Neurology, Uniformed Services University of the Health Sciences, Laboratory of Functional and Molecular Imaging, National Institute of Neurological Disorders and Stroke, Bethesda, MD

Placement Of Antibiotic Powder in Wounds During the Emergency Room
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Prehospital Intervention Analysis of Helicopter Crashes in Afghanistan
CPT Adam M. Spanier, MD, Emergency Medicine Resident (1); CPT Joseph W. Jude, MD, Emergency Medicine Resident (1); CPT Hugh Hiller, MD, Staff Physician (1); CPT Wells Weymouth, MD, Flight Surgeon (2); COL Cord Cunningham, MD, Staff Physician (1); LTC(P) Guyon J. Hill, MD, Staff Physician (1); MAJ Steven G. Schauer, DO, Staff Physician (3, 4)
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A Novel Innovation for Prehospital Hypothermia Management via STEAM: System for Thermogenic Emergency Airway Management
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External Focus of Attention to Mitigate Re-injury Risk and Maintain Readiness after Musculoskeletal Injury
Abbey Thomas, PhD, ATC, Assistant Professor of Kinesiology; Luke Donovan, PhD, ATC, Assistant Professor of Kinesiology, University of North Carolina at Charlotte, Charlotte, NC

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COL Jeffrey M. Tiede, MD; Reginald O’Hara, PhD; Lewis Sussman, PsyD, Center for the Intrepid, Brooke Army Medical Center

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CPT Stefanie Williams, MD, Emergency Medicine Resident, Carl R Darnall Army Medical Center, FT Hood, TX; CPT Erick Thronson, BSN, RN, CEN, CFRN, Trauma Nurse, Expeditionary Resuscitative Surgical Team 6, Special Operations Command – Africa; SO2 Mitchell Zwade, SOTM, SEAL Team EIGHT, Virginia Beach, VA; MAJ(P) Dan Brillhart, MD FACEP, Emergency Physician, Expeditionary Resuscitation Surgical Team 6, Special Operations Command - Africa

The Advantages of Calcium Chloride for Blood Transfusion Induced Hypocalcaemia
CPT Stefanie Williams, MD, Emergency Medicine Resident, Carl R Darnall Army Medical Center, FT Hood, TX; SO2 Matt Devo rian, SOTM, SEAL Team Eight, Virginia Beach, VA; MAJ(P) Dan Brillhart, MD FACEP, Emergency Physician, Expeditionary Resuscitation Surgical Team 6, Special Operations Command-Africa
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