SAN ANTONIO MILITARY HEALTH SYSTEM (SAMHS) AND UNIVERSITIES RESEARCH FORUM

EVIDENCE-BASED PRACTICE & RESEARCH IN HEALTHCARE: ENCOURAGING COLLABORATIVE PARTNERSHIPS

FRIDAY, MAY 20, 2016
THE UNIVERSITY OF TEXAS AT SAN ANTONIO MAIN CAMPUS
WWW.RESEARCH.UTSA.EDU/SURF/
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FREE WIFI
AirRowdy is the UTSA wireless network. It is available from any building at UTSA and can be used by UTSA students, faculty, staff, and guests. Open a Web browser (Safari, Firefox, etc.). You will be automatically connected to the appropriate AirRowdy login. Guests use the AirRowdy_Guest page.

TWITTER
Tweet what is happening at SURF using the hashtag #SASURF2016.

EARNING CONTINUING EDUCATION (CME/CNE) CREDITS OR AN ATTENDANCE CERTIFICATE FOR SURF
SURF participants can earn continuing education credits (CME—Continuing Medical Education or CNE—Continuing Nursing Education) or receive a certificate of attendance. Physicians can receive up to 5 AMA/PRA category 1 credits; nurses can receive up to 7.5 ANCC category 1 credits; and non-physicians/nurses may receive a certificate for their attendance. Instructions are provided at the registration table.

For more information contact:
• Army CNE Planner, Gary Schofield, at gary.l.schofield.civ@mail.mil or 210-916-2222
• Army CME Planner, Dr. David Stamper, at david.h.stamper2.civ@mail.mil or 210-916-3745
• Air Force CNE Planner, Dr. Lola Casby, at lola.casby.1.ctr@us.af.mil or 210-292-9058

NEW USERS
If you do not have an account, you must first register for an account on the website(s) above:
• Click on “Activity Registration”
• Click on “Request Login Id”
• Hit “Submit”
• You will receive a Login Id and password, but will need to wait XX hours to have account approved for use

OBTAINING YOUR CME/CNE CERTIFICATE
In order to obtain your CME/CNE Certificate, you must complete both the online activity evaluation and the request for credit form. You will see instructions on how to print your certificate after both the evaluation and request for credit forms have been submitted online.

1. Login to website(s) listed above.
2. From the menu on the left, click on CME/CNE User Accounts portal.
3. Enter your User ID and Password then click Login. Logon ID and Password are case sensitive. If your password is the same as your logon ID, you will be required to change your password. Follow the instructions on the screen to change your password. If you forgot your password, click on the link ‘Recover it here” (system will email your password to you instantaneously). Enter your password in the password field.
4. Before completing your evaluation, update your profile by clicking on User Home at the top of the screen then click on User Profile. Review your information for accuracy and Save. Click on User Home again to go back to the activity evaluation.
5. To evaluate the course, simply choose the activity that you are evaluating. Complete and submit the form.
6. The Request for credit form will immediately come up, complete and submit this form.
7. In the next screen, click on the View Certificate link to view and print your CNE certificate.
8. To obtain future copies of your certificate, click on the CNE Credit Summary screen. The certificate will be kept for six years.
INSTITUTIONAL LEADERSHIP
Dr. C. Mauli Agrawal is the Vice President of Research (VPR) at the University of Texas at San Antonio (UTSA). Agrawal will also serve as the interim provost and vice president for academic affairs at UTSA beginning June 1, 2016. He holds the Peter Flawn Professorship in Biomedical Engineering. Prior to joining UTSA in 2003, he worked at the University of Texas Health Science Center at San Antonio. Before that, he served on the faculty at Duke University. He obtained his Ph.D. from Duke University, MS from Clemson University, and a B. Tech. from IIT-Kanpur, India.

Prior to his appointment as VPR, he served as the Dean for the College of Engineering (COE) at UTSA. During his eight-year tenure as the dean, the COE experienced a 40% increase in student enrollment, a 50% increase in faculty size, increase in both student enrollment and faculty size, and a 400% rise in research funding. He was instrumental in establishing the Texas Sustainable Energy Research Institute at UTSA and helping it receive a $50 million pledge of support from CPS Energy.

In addition to his experience on the editorial boards of various scientific journals, he serves on the following non-profit boards: Board of Trustees, Southwest Research Institute, Clemson University’s College of Engineering Advisory Board, United Way’s Master’s Leadership Program, Biomed SA, Texas Research Park Foundation, and the San Antonio Medical Foundation.

During his professional career, Dr. Agrawal has authored more than 315 scientific publications, 29 patents and a textbook on biomaterials (2014). He is an International Fellow of Biomaterials Science and Engineering, a Fellow of the American Institute for Medical and Biological Engineering and was elected the 2006 national President of the Society for Biomaterials. In late 2015, he was named a Fellow of the National Academy of Inventors for his research and innovation in orthopedic and cardiovascular biomaterials and implants.

His bioengineering research group has been responsible for the launching of three companies in San Antonio. In 2007, he was awarded the UT System’s Chancellor’s Entrepreneurship and Innovation Award, and the Healthcare Hero Award by the San Antonio Business Journal. He is the 2010 recipient of the Julio Palmaz award for Innovation in Healthcare. In 2008, he was appointed by Governor Rick Perry to serve on the Advisory Board for the Texas Emerging Technology Fund, which he did until 2011.
Dr. Bernard Arulanandam obtained a Ph.D. in microbiology and immunology at the Medical College of Ohio and an executive M.B.A. at the University of Texas at San Antonio. Dr. Arulanandam is a cellular immunologist and directs a research program that is focused on understanding host-microbe interactions and identifying approaches to induce optimal mucosal protection and immunity. Specifically, Dr. Arulanandam’s research efforts are focused on vaccine development for Chlamydia trachomatis, the leading bacterial sexually transmitted infection and Francisella tularensis, the causative agent of pneumonic tularemia. Dr. Arulanandam’s research accomplishments are demonstrated by his continued funding from the National Institutes of Health, extensive list of research publications, and international recognition. Dr. Arulanandam is the Director of the South Texas Center of Emerging Infectious Diseases and currently directs the DoD Center of Excellence in Infection Genomics that encompasses a research program in microbial genomics and bacterial pathogenesis along with extensive community outreach and training components. In December 2012, Dr. Arulanandam was appointed as the Assistant Vice President of Research Support. In this capacity Dr. Arulanandam is involved in promoting and supporting research and scholarly activities at UTSA. In February 2015, Dr. Arulanandam was named a fellow of the American Association for the Advancement of Science (AAAS). He was elected by his peers for the honor, recognizing his scientific and socially distinguished efforts to advance science and its applications.
Dr. Andrea Giuffrida is Vice President for Research and Professor of Pharmacology at The University of Texas Health Science Center at San Antonio. He received his Ph.D. in Biology from the University of Catania (Italy), and worked as postdoctoral fellow at the Neuroscience Institute in San Diego (USA) and as an adjunct faculty at the University of California Irvine before joining the Department of Pharmacology in the School of Medicine at the Health Science Center.

Dr. Giuffrida has provided important breakthroughs to the neurobiology of the endocannabinoid system, which have been published in high-impact journals, including Nature and Nature Neuroscience. His research laboratory focus is on the role played by the endocannabinoid system in psychomotor disorders characterized by dopaminergic dysfunction, such as, schizophrenia and Parkinson’s disease. He serves on the editorial boards of International Journal of Neuropsychopharmacology and Pharmaceutical Regulatory Affairs.

During the 2011-2012 academic year, Dr. Giuffrida served as the Science & Technology Policy Fellow in the Office of Science Policy at the National Institutes of Health (NIH) and in the Office of the Director of the National Institute of Neurological Disorders and Stroke. As a Policy Fellow, Dr. Giuffrida gained a key understanding of political influences on the national science agenda and funding appropriations.
MAJOR GENERAL (USAF RET) BYRON C. HEPBURN, M.D.

Dr. Byron C. Hepburn, Maj Gen, USAF Ret, is Associate Vice President and the inaugural Director of the Military Health Institute at the University of Texas Health Science Center at San Antonio. In this role, he strengthens the University’s DoD and VA collaborations with the goal of improving the health and well-being of military personnel, veterans and their families through innovative medical research, health education and clinical care. He also holds the titles of Professor of Family and Community Medicine, and Assistant Dean for Military Health in the School of Medicine.

Dr. Hepburn has a distinguished military career spanning 38 years. He served as the inaugural Director of the San Antonio Military Health System (SAMHS). In addition, he was Commander of the 59th Medical Wing, Wilford Hall Ambulatory Surgical Center, Joint Base San Antonio- Lackland, the Air Force’s largest medical wing composed of 6,000 military, civilian, contract employees, residents and students. Previously, he served as Deputy Surgeon General, where he directed all operations of the Air Force Medical Service, a $5.1 billion, 43,000-person integrated health care delivery system serving 2.4 million beneficiaries at 75 military treatment facilities worldwide.

Dr. Hepburn is a distinguished graduate of the U.S Air Force Academy and earned a Master of Arts degree in European Studies for his work at the University of Geneva, Switzerland. He also graduated from the Uniformed Services University of Health Sciences School of Medicine and completed a residency in family practice. He was one of only 15 Air Force pilot-physicians and was a command pilot with more than 3,000 flight hours on the T-37, T-38, C-9A and C-17A aircraft. Dr. Hepburn is an honored recipient of the Mackay Trophy for his participation in the USS Cole medical evacuation mission, and was deployed to Afghanistan in 2001 in support of Operation Enduring Freedom.
Dr. Debra (“Deb”) Niemeyer is the 59th Medical Wing Chief Scientist, Joint Base San Antonio, and Scientific Advisor to the Air Force Surgeon General; serves as the technical authoritative liaison to Headquarters Air Force and Department of Defense, and representative to federal governance/policy bodies. The wing is the Air Force’s largest medical facility with over 6,000 staff providing deployed and in-garrison health care delivery, graduate medical education, specialty training, and clinical research. Dr. Niemeyer is responsible for high-level collaborations with other agencies, academia and industry. She works directly for the 59 MDW Commander at senior executive levels to advance modernization efforts, oversees the wing’s research portfolio and modernization roadmap. She directs resources, and advises on research integration into the San Antonio Military Health System, Major Commands, Service and Joint medical programs, strategic plans and investment strategies, and guides local assets in support of Joint/multi-agency research. As Scientific Advisor, she provides specialty consultation, represents the Air Force at meetings, and serves as liaison to the Air Force Chief Scientist who advises the Secretary and Chief of Staff of the Air Force. Dr. Niemeyer was commissioned in 1981 through Air Force ROTC. She directed clinical, operational and applied research laboratories around the world, was a first responder to and consultant for anthrax releases post-911, and served in special duty and headquarters assignments. She retired in June 2008, and accepted her current position, August 2008.
Colonel Shen-Gunther is an Army physician. She currently serves as the Chief, Department of Clinical Investigation (DCI) and Associate Program Director, Clinical Research Fellowship at Brooke Army Medical Center (BAMC), Fort Sam Houston, Texas. In these roles, she supports the mission of BAMC clinical research by promoting, coordinating, supporting and overseeing organized scientific inquiry in basic laboratory research, clinical research, and pre-clinical research using human and animal subjects at BAMC and the Regional Health Command-Central (RHC-C). DCI also supports Graduate Medical Education (GME) by encouraging and supporting research conducted by resident physicians at BAMC.

Dr. Shen-Gunther received her B.S. degree from Penn State University and M.D. degree from Jefferson Medical College in Philadelphia, PA. She completed her internship and residency in Obstetrics and Gynecology in 1990 at Tripler Army Medical Center in Honolulu and later received subspecialty fellowship training (1994-1997) in Gynecologic Oncology at the University of Oklahoma. She completed her Master of Science in Clinical Investigation (2011) and Doctor of Philosophy (2016) in Translational Science at UT Health Science Center at San Antonio.

Since 1990, Dr. Shen-Gunther has served as Chief of Service and/or faculty physician in the US Army, academic universities, and civilian practice. Her previous assignments and appointments have included Nuernberg Army Hospital in Germany, Ireland Army Hospital in Kentucky, University of Pennsylvania in Philadelphia, University of Nevada in Las Vegas, Madigan Army Medical Center in Washington, and Naval Medical Center San Diego. She has held appointments of Assistant Professor of Obstetrics & Gynecology at University of Pennsylvania, University of Nevada, University of Washington, and USUHS. She also served as a combat surgeon for the 759th Forward Surgical Team deployed to southern Afghanistan in 2006.

Her research interests include novel surgical techniques and technology as applied to Gynecologic Oncology and War Surgery. Her current translational research projects include Human Papilloma Virus (HPV) genotyping, HPV epigenetics, HPV oncoproteins, and Next-Generation Sequencing.
Woodson "Scott" Jones, MD is the Dean, Designated Institutional Official (DIO) and Chief Executive Officer (CEO) of the San Antonio Uniformed Services Health Education Consortium (SAUSHEC). SAUSHEC is comprised of 32 Accreditation Council for Graduate Medical Education (ACGME) accredited training programs with approximately 600 interns, residents and fellows. SAUSHEC is also comprised of approximately 21 graduate-level allied health training programs with approximately 100 trainees. Dr. Jones served as the Associate Dean for Graduate Medical Education (GME), SAUSHEC, and Director of Medical Education for the 59th Medical Wing, Lackland AFB, until his retirement from the Air Force in June 2011. Dr. Jones successfully completed the Association of American Medical Colleges’ Graduate Medical Education Leadership Development Course in May 2011. Dr. Jones holds academic appointments as Adjunct Professor of Pediatrics, University of Texas Health Science Center San Antonio (UTHSCSA) and as an Associate Professor of Pediatrics, Uniformed Services University of the Health Sciences (USUHS), Bethesda, MD. His previous positions include: 1) Pediatric Residency Program Director, SAUSHEC 2) Chief of Pediatrics, Craig Joint Theater Hospital, Bagram AB, Afghanistan 3) Pediatric Clerkship Director, USUHS 3) Director of Medical Student Education, Wilford Hall Medical Center (WHMC) 4) Maternal/Child Flight Commander, 31st Medical Group, Aviano AB, Italy, and 5) Chief of Residents, Department of Pediatrics, WHMC. Dr. Jones completed his Pediatric Residency at WHMC in 1993, graduated in 1990 Alpha Omega Alpha from the University of Texas Medical Branch, Galveston, and in 1986 with a BA in Biology from Baylor University.

Dr. Jones’ honors include multiple research, clinical and teaching awards, to include William P. Clement, Jr. Award for Excellence in Education, awarded to “the uniformed faculty educator who exemplifies the principles of excellence in education by personal example and performance” from the USUHS Class of 2006. In 2012, he was selected as an honorary member of the Order of Military Medical Merit for his contributions to U.S. Army Medical Department. Dr. Jones’ academic career includes 80 plus published articles/chapters/abstracts/national/international presentations, primarily in medical education. Dr. Jones remains clinically active serving as pediatric ward and nursery attending at the San Antonio Military Medical Center and supervises residents in the outpatient pediatric clinic at the Wilford Hall Ambulatory Surgical Center. While in the Air Force, he was awarded the Legion of Merit Medal, the Joint Service and AF Meritorious Service Medals, AF Commendation Medal, Joint Service and AF Achievement Medals, two NATO medals and an Afghanistan Campaign Medal.
**LIFE CHANGING RESEARCH**

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**What is SALSI?**

SALSI is the San Antonio Life Sciences Institute and it has one mission—conquer the challenges facing healthcare in Texas and the nation. To achieve this, SALSI uses the collaborative expertise of The University of Texas Health Science Center at San Antonio and The University of Texas at San Antonio (UTSA), both of which are premier research institutions within Central Texas.

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**Areas of Research**

- Cancer Research
- Regenerative Medicine
- Infectious Diseases & Vaccinations
- Technology
- Biomedical Engineering
- Health Disparities
- Brain Health
- Translational Science

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WWW.UTSALSI.ORG

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**San Antonio Life Sciences Institute**
Breakthrough Discoveries

Top-Tier Research
Ongoing research in neuroscience, biochemistry, pharmacology, microbiology, data analysis and advanced visualization are leading UTSA researchers to breakthroughs in brain health, vaccine development and regenerative medicine.

Top-Tier Partners
UTSA’s partnerships with the military, government, industry, academia and other key collaborators in the United States and abroad are propelling interdisciplinary solutions to combat today’s most pressing global health challenges in clinics, in hospitals and on the battlefield.

Top-Tier Technology
UTSA researchers are developing novel ways of preventing and treating disease at the Kleberg Advanced Microscopy Center, which includes one of the most advanced transmission electron microscopes in the world, and core facilities in biophotonics, nanotechnology and human health, proteomics and high-throughput screening.

The University of Texas at San Antonio™

Learn more about UTSA’s research initiatives in integrated biomedicine at research.utsa.edu
UT HEALTH SCIENCE CENTER SAN ANTONIO
MILITARY HEALTH INSTITUTE
SALUTES THE SURF RESEARCHERS

The Military Health Institute is dedicated to improving the health of our nation’s military service members, veterans and their families.

The Military Health Institute serves to expand the collaboration between the UT Health Science Center San Antonio, the San Antonio Military Health System, South Texas Veterans Health Care System, UT System institutions, San Antonio academic and industry partners, and national and international organizations.

The Institute was created to develop new opportunities for:
Education | Research | Clinical Care

Byron C. Hepburn, M.D.
Maj. Gen. USAF (Ret.)
Associate Vice President and Director
Military Health Institute

210-567-2075
uthscsa.edu/military
SAN ANTONIO MILITARY HEALTH SYSTEM (SAMHS) FACT SHEET

The San Antonio Military Health System (SAMHS) is led by Air Force (USAF) and Army (USA) general officers and is responsible for providing management and oversight of business, clinical, and educational functions of all Military Health System (MHS) Medical Treatment Facilities (MTFs) located in the San Antonio metropolitan area. As one of the MHS’ first Enhanced Multi-Service Markets (EMSM), the SAMHS is comprised of USAF and USA units that include:

The 59th Medical Wing (Component Command Structure) with Subordinate Units:
- North Central
- Federal Clinic Randolph
- Clinic Reid Clinic
- Wilford Hall Ambulatory Surgical Center

Brooke Army Medical Center (Component Command Structure) with Subordinate Units:
- Fort Sam Houston Primary Care Clinic
- McWethy Troop Medical Clinic
- San Antonio Military Medical Center (SAMMC)
- Schertz Medical Home
- Camp Bullis Taylor Burk Clinic

With these 9 MTF platforms, the SAMHS operates with a ~$1.2B budget and 12K staffs who serve over 240K beneficiaries. As an integrated health system, the SAMHS continues to optimize the direct care system while strengthening the collaboration with Department of Veterans Affairs and Private Sector Care partners.

The SAMHS is dedicated to the highest quality, patient centered care with a clear focus on safety, access to care, and customer service, while providing first-rate graduate medical and other health education and training programs, conducting state-of-the-art research and maintaining the critical global readiness of all war fighters.

Leadership
Director: Brigadier General Barbara R. Holcomb (USA)
Deputy Director: Major General Bart O. Iddins (USAF)
Chief Operating Officer: Colonel Michael J. Higgins

☆☆★ SURF 2016 ★☆☆
ESTABLISHMENT OF SAMHS
The Defense Realignment and Closure Act (as amended through the National Defense Authorization Act for 2006) directed changes to the MHS’ organizational roles, responsibilities, and locations within Joint Base San Antonio.

- Memorandum of Agreement establishing the SAMHS was signed by the Chiefs of Staff of the Air Force and Army on 27 Sep 10
- SAMHS activated on 15 Sep 11
- Deputy Secretary of Defense Memorandum, Implementation of the Military Health System Governance Reform, 11 Mar 13, designates the SAMHS as one of the first six eMSMs with an Initial Operating Capability (for enhanced authorities) set as 1 Oct 13

eMSMs
Six eMSMs designated across the MHS—Colorado Springs, Colorado; National Capital Region; Oahu, Hawaii; Puget Sound, Washington; San Antonio, Texas; and Tidewater, Virginia
Enhanced authorities include:
“...manage the allocation of the budget for the market...”
“...direct the adoption of common clinical and business functions for the market...”
“...optimize readiness to deploy medically ready forces and ready medical forces...”
“...direct the movement of workload and workforce between or among MTS..”

SUCCESSES
COMMUNITY PARTNERSHIPS/COLLABORATIONAL
- Federal Health Care Consortium
- South Texas Regional Advisory Council (STRAC) San Antonio Mayor’s Council of Fitness
- Greater San Antonio Chamber of Commerce Health & Bioscience Committee BioMed SA
- VA/DoD test site for integrated Electronic Health Record (HER) VA/DoD Integrated Disability Evaluation System (IDES)
- North Central Federal Clinic joint venture between AF and VA

STATE-OF-ART HEALTHCARE
- Largest DoD inpatient facility and only DoD Level 1 trauma center in United States with 425 inpatient beds and 32 operating rooms for inpatient and ambulatory surgery, providing trauma care to both DoD beneficiaries and the local community
- Largest DoD Outpatient Ambulatory Surgical Center
- DoD’s only American Burn Association verified Burn Center
- DoD’s only Bone Marrow Transplant Unit and Hematology/Oncology Clinic (ranking among the top cancer programs in the nation)
- High-tech Cardiac Catheterization LabCenter for the Intrepid provides full spectrum of amputee rehabilitation as well as advanced outpatient rehabilitation for burn victims and limb salvage patients with residual functional loss
- DoD’s only rooftop helipad for patient transport
CONFERENCE APPRECIATION

LEADERSHIP
Mauli Agrawal, Ph.D., P.E., Vice President for Research – UTSA
Bernard Arulanandam, Ph.D., M.B.A., Assistant Vice President for Research – UTSA
Andrea Giuffrida, Ph.D., Vice President for Research – UTHSCSA
Byron Hepburn, Ph.D., Associate Vice President and Director, (Maj. Gen, USAF, Retired) – UTHSCSA
Deborah Niemeyer, Chief Scientist, (Col, USAF, Retired) – 59th MDW
COL Jane Shen-Gunther, M.D., Ph.D., Chief, Department of Clinical Investigation – BAMC
Woodson Jones, M.D., Dean, (Col, USAF, Retired) – SAUSHEC

PLANNING TEAM
Mark Nijland, Ph.D. – UTHSCSA
Victor Sylvia, Ph.D. – 59th MDW
Col Brenda Morgan – 59th MDW
Michelle R. Mandy, MPA, BSN, TNS, PCCN, LNC, EBC – BAMC
Sharon M. Solomon, MHA/MSN, BSN, RN – BAMC
Jaclyn Shaw, M.S. – UTSA
Linda Lopez George, M.A. – UTHSCSA
Ana Delgado, B.B.A. – UTSA
Daniel Arriaga, B.A. – UTSA
Raquel Lopez – 59th MDW

CONTINUING EDUCATION
UNITS COORDINATORS
Lola R. Casby, MSN, EdD – 59th MDW
Gary Schofield, MSN, RN – BAMC
David Stamper, EdD – BAMC

MARKETING & COMMUNICATIONS
Sarah Hada, B.A. – UTSA
Austin Gutierrez, B.F.A. – UTSA
Rachel Dowler, M.B.A. – UTHSCSA
TaShavia Beverly-Prince, B.A. – UTHSCSA
Joanna Carver, M.S.J. – UTSA
REGISTRATION
UNIVERSITY CENTER LOBBY

Registration  
H-E-B University Center Galleria  
7:00am - 8:00am
Opening Remarks  
Ballroom (HUC 1.104)  
8:00am - 8:15am

MORNING SYMPOSIA SESSIONS
8:30AM - 9:45AM

Symposium One: Personalized Medicine  
Ballroom (HUC 1.104)  
8:30am - 9:45am
Clifton Dalgard, Lisa Lott, Thomas Beachkofsky, Thomas Gibbons, Lawrence Petz, 
Victor Sylvia, Debra Niemeyer

Symposium Two: Disaster Medicine in the Combat Zone and Civilian Community  
Bexar Room (HUC 1.102)  
8:30am - 9:45am
Larry Trevino, Emily Kidd, Nim Kidd and Chetan Kharod

Symposium Three: The Air Force Dental Research Program: Identifying Research Gaps to Develop a Meaningful Platform  
Harris Room (HUC 2.212)  
8:30am - 9:45am
William Dunn, Drew Fallis, Douglas Risk, Wen Lien and Kraig Vandewalle

Symposium Four: En Route Care  
Travis Room (HUC 2.202)  
8:30am - 9:45am
Joseph Maddry, James Lantry and Jose Salinas

Symposium Five: Chronic Pain and Substance Abuse: What’s the Connection?  
Hidalgo Room (HUC 2.214)  
8:30am - 9:45am
Jennifer Potter, Sandra Valtier, Mary Jo Pugh, Erin Finley and Donald McGeary

MORNING BREAKOUT PRESENTATIONS
10:00AM - 11:30AM

Focus Area: Pre-Hospital Trauma and En Route Care
Bexar Room (HUC 1.102)

Presentation 1: Patient Handover from Emergency Medical System Staff to Emergency Department Staff: How Are We Doing? A Preliminary Analysis  
Lauren Reeves, Alejandra Mora, Shelia Savell and Joseph Maddry

Presentation 2: Does Experience Matter? Paramedic Code Volume Effect on Out of Hospital Cardiac Arrest Outcomes  
Elliot Ross, Nicholas Weiss, Craig Cooley, Stephen Harper and Theodore Redman

Presentation 3: Okinawa Emergency Medical Services System: Is an Upgrade to Advanced Life Support Warranted?  
Elliot Ross, Benjamin Walrath, Chetan Kharod and Stephen Harper

Presentation 4: Evacuation of Combat Patients by Military Critical Care Air Transport Teams with a Restricted Transfusion Approach is Safe  
Shelia Savell, Joseph Maddry, Alejandra Mora and Vikhyat S. Bebarta
Focus Area: Inpatient and Outpatient Care
Mesquite Room (UC 2.01.24)

**Presentation 1:** A Proposal for Provider Competencies in Suicide Treatment
Michael Farjellah

**Presentation 2:** Topical Ethyl Chloride To Reduce Pain Associated With Venous Catheterization: A Randomized Cross-Over Trial
Kurt Fossum, Sue Love and Michael April

**Presentation 3:** Treatment Considerations For Military Women With Posttraumatic Stress Disorder Subsequent To Military Sexual Trauma
Shamecca Scott

**Presentation 4:** Identifying Staff-Level Correlates And Factors Of Nursing Teamwork In A Military Hospital
Carla Dickinson

Focus Area: Biomedical Research
Travis Room (HUC 2.202)

**Presentation 1:** Occluded Cigarette Smoke Exposure Causing Localized Chloracne-Like Comedones
Andrew Patterson, Frances Tian, Dirk Elston and Benjamin Kaffenberger

**Presentation 2:** Damage-Associated Molecular Patterns (DAMPs) And The Inflammatory Response In Severely Injured Patients
Susannah Nicholson, Daniel Merrill, Meenakshi Rani, Aaron Lewis, Brian Eastridge and Martin Schwacha

**Presentation 3:** Phase II U-2 Study - Single Exposure Trial: Findings at 1 Year
Jeremy Bernot, Paul Sherman, Stephen Mcguire and Peter Kochunov

**Presentation 4:** Predicting Success of Preliminary Surgical Residents: A Multi-Institutional Study
Mohammed Al Fayyad and Daniel Dent

Focus Area: Preventative Medicine
Harris Room (HUC 2.212)

**Presentation 1:** Vietnam Era Veteran Status and Transition into Cognitive Dysfunction in Men Beginning at Age 50
Pamela Willrodt

**Presentation 2:** The Prevalence Of Metabolic Syndrome In Recent Air Force Retirees
Mark True, Jana Wardian, Tom Sauerwein and Marcus Cranston

**Presentation 3:** Enzyme Triggered Drug Delivery for Graft Targeted Immunosuppression and Neuroregeneration after VCA
Sharon Lawson, Lin Wang, Anton Fries, Renford Cindass, Kevin Wu, Vijay Gorantla and Michael Davis

**Presentation 4:** Hyperbaric normothermic perfusion mitigates reperfusion injury in porcine VCA
Kevin Wu, Sharon Lawson, Lin Wang, Renford Cindass, Vijay Gorantla and Michael Davis

Focus Area: Technology and Innovation in Healthcare
Hidalgo Room (HUC 2.214)

**Presentation 1:** Good Mourning, You Tube! Grieving and Bereaving on the World's Most Popular Video-sharing Website
Shira Amdur, Aparna Seetharama, Jeanette Ross, Sandra Sanchez-Reilly, Shuko Lee

**Presentation 2:** Using Technology to Provide Specialty Consultation, Current Clinical Practice Guideline (CPG) Education, And Resource Tools To Primary Care Clinics
Connie Morrow

**Presentation 3:** Visualizing And Understanding The Spread Of Moods And Emotions Among Graduate Nursing Students
Patricia Schmidt, Thomas Moore, Gregory Lambert and Patrick Finley

**Presentation 4:** Behavioral Skills Training and generalization of parent implemented evidence-based interventions
Felicia Castro-Villarreal and Leslie Neely

**NETWORKING LUNCHEON**
11:30AM – 12:30PM
BALLROOM (HUC 1.104 & 1.106)
**AFTERNOON SYMPOSIA SESSIONS**

**12:45PM - 2:00PM**

**Symposium Six:** Advances in Military Regenerative / Restorative Medicine  
Rendford Cindass, Sharon Lawson, Kevin Wu, Vijay Gorantla, Michael Davis  
Harris Room (HUC 2.212)  
12:45pm - 2:00pm

**Symposium Seven:** The Primary Care Behavioral Health (PCBH) Model: Transforming Health Care for Civilian, Military and Veteran Patients in Bexar County and Beyond  
Kathryn Kanzler, Stacy Ogbeide, Elizabeth Najera and Lisa Kearney  
Bexar Room (HUC 1.102)  
12:45pm - 2:00pm

**Symposium Eight:** High Stakes Summative Assessment to Determine Nursing Competency  
Michelle Mandy, Gary Schofield, Scott Strater-Tafolla and Sharon Solomon  
Travis Room (HUC 2.202)  
12:45pm - 2:00pm

**Symposium Nine:** Increasing Near Miss Reporting on a Telemetry Ward  
Gwendolyn Godlock, Mollie Christiansen, Stephen Wilcox and Robin Francis  
Hidalgo Room (HUC 2.214)  
12:45pm - 2:00pm

**AFTERNOON BREAKOUT PRESENTATIONS**

**2:15PM – 3:45PM**

**Focus Area: Public Health and Wellness**  
Ballroom (HUC 1.104)

**Presentation 1:** A Quantitative Evaluation of the Bexar County Diabetes Self-Management Program  
Amanda Manzello and Shamshad Khan

**Presentation 2:** The Effect of Interrole Conflict on Health Outcomes  
David Oviatt, Michael Baumann and Raymond Garza

**Presentation 3:** Improving Diabetes Care in the Military Primary Care Clinic: Case Study Review  
Danielle Bersabe and Jana Wardian

**Presentation 4:** Female Gentile Mutilation/Cutting (FGM/C) as a Serious Public Health Challenge in Egypt  
Angie Galal and Shamshad Khan

**Focus Area: Prehospital Trauma and En Route Care**  
Harris Room (HUC 2.212)

**Presentation 1:** Application of the National Park Service Emergency Medical Services Program Audit Worksheet to a Department of Defense Emergency Medical Services System: A Pilot Assessment of US Military Emergency Medical Services on the Island of Okinawa, Japan  
Elliot Ross, Benjamin Walrath and Chetan Kharod

**Presentation 2:** Efficacy of intravenous cobinamide versus hydroxocobalamin or saline for treatment of severe hydrogen sulfide toxicity in a swine (Sus scrofa) model  
Joseph Maddry, Norma Garrett, Vikhyat Bebarta, Susan Boudreau, Maria Castaneda and Gerry Boss

**Presentation 3:** A Comparison of Bag-Valve-Mask (BVM) Ventilation Using a Standard vs a Modified BVM in a Manikin Model for the Single Rescuer  
Baruch Zobrist, Monica Casmaer and Sue Love

**Presentation 4:** Reduced Fatty Acid Binding Capacity of Human Albumin Used in Volume Resuscitation May Potentially Increase Hemolysis in Hypovolemic Shock  
Alexander Penn, Michael Dubick and Ivo Torres Filho
Focus Area: Immunology and Infectious Diseases
Bexar Room (HUC 1.102)

Presentation 1: *Acinetobacter baumannii* Gut Colonization is Mediated by Secreted Thioredoxin-A and Secretory IgA
Patrick Ketter, Jieh-Juen Yu, M. Neal Guentzel, J. Seshu, Karl Klose, Andrew Cap and Bernard Arulanandam

Presentation 2: Characterization of a Live Attenuated Vaccine for Protection Against Multi-Drug Resistant *Acinetobacter baumannii*
Sarah Ainsworth, Patrick Ketter, Jieh-Juen Yu, M. Neal Guentzel and Bernard Arulanandam

Presentation 3: Chagas Disease in Texas: Targeted Outreach and Education for Awareness for Health Care Providers
Paula Stigler Granados, Gerardo Pacheco, Trevor Maness, Jose Betancourt and Thomas L. Cropper

Presentation 4: Host MicroRNAs Regulate Host Immunity and Disease Pathogenesis in *Chlamydia trachomatis* Infection
Rishein Gupta, Tanvi Arkatkar, Jonathon Keck, Kevin Castillo, Jiehjuen Yu, M Neal Guentzel, James Chambers and Bernard Arulanandam

Focus Area: Policy, Practice, Collaborations
Hidalgo Room (HUC 2.214)

Presentation 1: Treatment Seeking Beliefs and Behaviors in Air Force Nursing Personnel
Stephen H. A. Hernandez, Brenda J. Morgan and Mark B. Parshall

Presentation 2: Nurse Champions- Leading the Way in Reforming Health Outcomes
Heather Ortiz

Presentation 3: Research Related Activities: Generational Difference and Preferences
Kristal C Melvin, Donna L Belew and Bonnie M Jennings

Presentation 4: Veteran Status and Health Literacy: A Population Analysis
Pamela Willrodt

Focus Area: Health Literacy and Communications
Travis Room (HUC 2.202)

Presentation 1: Contextual Analysis of Public Attitudes and Opinions on Facebook Towards the Veterans Health Care System
Art Villarreal and Shamshad Khan

Presentation 2: Family talk: How do childhood cancer and other chronic illnesses impact siblings’ communication?
Kristen Sinclair, Viviana Rojas, Shamshad Khan and Karen Daas

Presentation 3: Challenges and Successes in Providing Diabetes Self-Management Education Via TeleHealth
Nina Watson and Doris Acuna

Presentation 4: Treating Taboo: HIV/AIDS and Media Campaigns
Ritasha Sharma and Shamshad Khan

NETWORKING POSTER SESSION
3:45PM - 4:45PM
BALLROOM (HUC 1.104 & 1.106)

CLOSING REMARKS
4:45PM
BALLROOM (HUC 1.104)
POSTER #1
Nurse Champions- Leading the Way in Reforming Health Outcomes - Heather Ortiz, Deedra Zabokrtsky, Michele Amstutz and Araceli Bernal

POSTER #2
Acinetobacter baumannii Gut Colonization is Mediated by Secreted Thioredoxin-A and Secretory IgA - Patrick Ketter, Jieh-Juen Yu, M. Neal Guentzel, J. Seshu, Karl Klose, Andrew Cap and Bernard Arulanandam

POSTER #3
The Prevalence of Metabolic Syndrome in Recent Air Force Retirees - Mark True, Jana Wardian, Tom Sauerwein and Marcus Cranston

POSTER #4
Visualizing and Understanding the Spread of Moods and Emotions Among Graduate Nursing Students - Patricia Schmidt, Thomas Moore, Gregory Lambert and Patrick Finley

POSTER #5
Patient Handover From Emergency Medical System Staff to Emergency Department Staff: How Are We Doing? A Preliminary Analysis - Lauren Reeves, Alejandra Mora, Shelia Savell and Joseph Maddry

POSTER #6
Evacuation of Combat Patients by Military Critical Care Air Transport Teams With a Restricted Transfusion Approach is Safe - Shelia Savell, Joseph Maddry and Alejandra Mora

POSTER #7
Treatment Seeking Beliefs and Behaviors in Air Force Nursing Personnel - Lt Col Stephen H. A. Hernandez, Col Brenda J. Morgan and Mark B. Parshall

POSTER #8
The Effect of Interrole Conflict on Health Outcomes - David Oviatt, Michael Baumann and Raymond Garza

POSTER #9
Efficacy of intravenous cobinamide versus hydroxocobalamin or saline for treatment of severe hydrogen sulfide toxicity in a swine (Sus Scrofa) model - Joseph Maddry, Norma Garrett, Vikhyat Beparta, Susan Boudreau, Maria Castaneda and Gerry Boss

POSTER #10
Topical Ethyl Chloride to Reduce Pain Associated with Venous Catheterization: A Randomized Cross-Over Trial - Kurt Fossum, Sue Love and Michael April

POSTER #11
Enzyme Triggered Drug Delivery for Graft Targeted Immunosuppression and Neuroregeneration after VCA - Sharon Lawson, Lin Wang, Anton Fries, Michael Davis, Renford Cindass and Kevin Wu

POSTER #12
Reduced Fatty Acid Binding Capacity of Human Albumin Used in Volume Resuscitation May Potentially Increase Hemolysis in Hypovolemic Shock - Alexander Penn, Michael Dubick and Ivo Torres Filho

POSTER #13
Identifying Staff-Level Correlates and Factors of Nursing Teamwork in a Military Hospital - Carla Dickinson

POSTER #14
A Comparison of Bag-Valve-Mask (BVM) Ventilation Using a Standard vs a Modified BVM in a Manikin Model for the Single Rescuer - Baruch Zobrist, Monica Casmaer and Sue Love

POSTER #15
Damage-Associated Molecular Patterns (DAMPs) and the Inflammatory Response in Severely Injured Patients - Susannah Nicholson, Daniel Merrill, Meenakshi Rani, Aaron Lewis, Brian Eastridge and Martin Schwacha

POSTER #16
Predicting Success of Preliminary Surgical Residents: A Multi-Institutional Study - Mohammed Al Fayyadh and Daniel Dent
POSTER #17
Application of the National Park Service Emergency Medical Services Program Audit Worksheet to a Department of Defense Emergency Medical Services System: A Pilot Assessment of US Military Emergency Medical Services on the Island of Okinawa, Japan - Elliot Ross, Benjamin Walrath and Chetan Kharod

POSTER #18
Okinawa Emergency Medical Services System: Is an Upgrade to Advanced Life Support Warranted? - Elliot Ross, Benjamin Walrath, Chetan Kharod and Stephen Harper

POSTER #19
Hyperbaric normothermic perfusion mitigates reperfusion injury in porcine VCA - Kevin Wu, Sharon Lawson, Lin Wang, Renford Cindass, Vs Gorantla and Mr Davis

POSTER #20

POSTER #21
ABSTRACT RETRACTED FROM POSTER SESSION

POSTER #22
Chagas Disease in Texas: Targeted Outreach and Education for Awareness for Health Care Providers - Paula Stigler Granados, Gerardo Pacheco, Trevor Maness, Jose Betancourt and Thomas L. Cropper

POSTER #23
Skin Diseases Associated with Agent Orange and Other Organochlorine Exposures - Andrew Patterson, Benjamin Kaffenberger, Richard Keller and Dirk Elston

POSTER #24
Toll-Like Receptor-Mediated Regulation of Platelet Function - Aaron Lewis, Xiaowu Wu, Daniel Darlington, Andrew Cap and Martin Schwacha

POSTER #25
Sleep Disorders in Active Duty Females - Dale Capener, Vincent Mysliwiec, Matthew Brock, Robert Walter and Panagiotis Matsangas

POSTER #26
Building Diabetes Champions in Primary Care: The Air Force Experience - Darrick Beckman, Mark True, Jana Wardian, Nina Watson, Connie Morrow and Tom Sauerwein

POSTER #27
Helicobacter Pylori Diagnoses Among UTMed Clinic Patients in San Antonio, Texas: A Health Disparity Check - Dorothy Long Parma, Alex Bokov, Edgar Munoz, Alfredo Tirado-Ramos and Amelie Ramirez

POSTER #28
Med Zone Bundle Implementation on a Medical Surgical Unit - Andrea Lishen, John Paul Dugyon, Carmen Dickerson, Charice Lee, Bridget Perrin, Amanda Lawrence, Stacey Brundrett and Jonathan Kong

POSTER #29

POSTER #30
Tuberculosis Prevention for Bexar County: Targeted TB Testing of High-Risk Groups with T-Spots Using Medicaid 1115 Waiver Funding - Tommy Camden, Barbara Seaworth, Lisa Armitige, Norma Santos, Dora Marrufo, John Flavin, Ignacio Oliva, Leticia Jalomo, Roxanna Graham, Rose Barajas and Katherine Bondoc

POSTER #31
Stop The Bleeding! One City's Experience with Prehospital Tourniquet Use. - Ted Redman, David Wampler and Elliot Ross

POSTER #32

POSTER #33

POSTER #34
Alterations in CD4 and CD8 T-cells in the Burn Wound - Meenakshi Rani and Martin Schwacha

POSTER #35
Trajectories of Comorbidities Among Iraq and Afghanistan Veterans - Mary Jo Pugh, Erin Finley, Carlos Jaramillo, Blessen Eapen, Alicia Swan, Catheryn Orihuela and Sandra Morissette

POSTER #36
Hearing Loss and Tinnitus: Prevalence and Comorbidities Associated with Traumatic Brain Injury in Iraq and Afghanistan Veterans - Alicia Swan, Jeremy Nelson, Brittany Swiger, Carlos Jaramillo, Blessen Eapen, Mark Packer and Mary Jo Pugh

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POSTER #37
Devleopment of a Multi-Construct Instrument for the Assessment of Suicide-Related Behaviors - Augustine Osman, Mary McNaughton-Cassill and Sandra Morissette

POSTER #38
Clinical Effectiveness and Changes in Care Utilization Derived from a Military Adolescent Multidisciplinary Headache Clinic- Andrew Ormond and Brian Faux

POSTER #39
Innovation in Implementing the VA Epilepsy Centers of Excellence - Holly Lanham, Katharine Mcmillan, Elise Boucher and Mary Jo Pugh

POSTER #40
Syphilis Epidemiology: Use to Address the Epidemic in Bexar County - Cara Hausler, John Berlanga, Junda Woo and Anil T. Mangla

POSTER #41
Management of Adverse Contrast Reactions: A Simulation-based Performance Evaluation of Radiology Residents - Timothy Russell, Sunthosh Madireddi, Justin Costello and Aaron Kirkpatrick

POSTER #42
Comfort Care Kits to Promote a Therapeutic Environment - Jerica Korte, Debra Currie, Morgan Bennet

POSTER #43

POSTER #44
Operating Table & Surgical Stool Height Adjustments For Ergonomical Otolaryngology Procedures - Anam Azimuddin, Philip G. Chen, Erik K. Weitzel and Kevin C. McMains

POSTER #45
Healthcare Experience and Preferences of Veterans with PTSD since Implementation of the Veterans Choice Program - Elizabeth Haro, Erin Finley, Michael Mader, Lauren Cortez, Mary Bollinger and Mary Jo Pugh

POSTER #46
Potential Biomarkers in Stevens Johnson Syndrome and Toxic Epidermal Necrolysis - Amanda Laska, Marie Han, Patrick Brown and Thomas Beachkofsky

POSTER #47
Comfort Room Utilization in an Inpatient Behavioral Health Setting - Braden Butterfield and Ann Marie Lazarus

POSTER #48

POSTER #49
Comparison of Treatment Options for Obstructive Sleep Apnea - David Bradley

POSTER #50
Antigen-Specific Immune Responses Following Chlamydia trachomatis Pulmonary Infection is Dependent on Host MicroRNAs - Jonathon Keck, Kevin Castillo, Jieh-Juen Yu, M. Neal Guentzel, James Chambers, Rishein Gupta and Bernard Arulanandam

POSTER #51
Nurse-Led Cognitive Behavioral Therapy for Insomnia on Servicemembers with PTSD in a Residential Treatment Facility - Christopher Weidlich, Betty Garner, Marva Harriott, Richard Schobitz, Dale Glaser, Patricia Shaw and Doris Ugarriza

POSTER #52
Introducing a Novel Referral Algorithm for Nasal Bone Fractures to Improve Patient Care and Utilization of Healthcare Resources - Alexander Lanigan, Adrienne Laury and Sarah Bowe

POSTER #53
Pediatric Prehospital Livesaving Interventions in a Combat Setting - A Prospective, Multicenter Study - Stephanie Russell, Alejandra Mora and Joseph Maddry

POSTER #54
Multicenter, Prospective Study of Prehospital Administration of Analgesia in the Combat Theater in Afghanistan - Joni Paciocco, Steven Schauer, Alejandra Mora and Joseph Maddry

POSTER #55
Evaluation of Total Daily Dose and Glycemic Control for Patients on U-500 Insulin Admitted to the Hospital - Andrew Paulus, Jeffrey Colburn, Jack Lewi, Irene Folaron, Sky Graybill, Richard Davis, Darrick Beckman and Mark True

POSTER #56
Paramedic Attitude Toward Patient Hand-off to Level 1 Trauma Team - David Wampler, David Miramontes, Lawrence Roakes, Preston Love, Michael Stringfellow, Shelia Savell, Joseph Maddry, Eric Epley and Brian Eastridge
POSTER #57
Comparison of Hydroxocobalamin Versus Norepinephrine Versus Saline in a Swine Model of Severe Septic Shock - Joseph Maddry, Norma Garrett, Vikhyat Bebarta, Maria Castaneda and Susan Boudreau

POSTER #58
Early Detection of Patient Deterioration Using Continuous Vital Sign Monitoring - Nick Mathers, Theresa Kloewer and Rosemary Kennedy

POSTER #59
Modeling Exposure Therapy in Rats: Fear Extinction Reverses the Chronic Stress-Induced Shift from Active to Passive Coping Behavior - Elizabeth Fucich, Madeleine Saunders and David Morilak

POSTER #60
Impact of the Group Lifestyle Balance (GLB) Program on Diabetes Prevention in the Military Health System - Rick Davis, Mark True, Jack Lewi, Tom Sauerwein and Jana Wardian

POSTER #61
Staff Compliance with Smoke Evacuation in the Operating Room - David Bradley and Jeremy Etzkin

POSTER #62

POSTER #63
“A New Lease on Life”: Developing a Survivorship Program for Young Adult Cancer Survivors in South Texas - Susanne Schmidt, Aubree Shay and Helen Parsons

POSTER #64
Association of Airway Management with Neurologic Outcomes in Patients with Out-of-Hospital Cardiac Arrest - Julian Mapp, Christopher Velasquez and David Wampler

POSTER #65
Analysis of Disease and Nonbattle Injury in US Military Personnel Deployed in Support of Operation OBSERVANT COMPASSS - Julian Mapp, Russell Fields and Andrew Oh

POSTER #66
Fabrication of an Electrospun Chitosan-blend-Poly(Ethylene Oxide)-co-Fibrinogen Nanofibrous Scaffold with Biphasic Drug Delivery Potential - Tony Yuan, Phillip Jenkins, Ann Digeorge Foushee, Angela Jockheck-Clark and Jonathan Stahl

POSTER #67
Characterization of a Live Attenuated Vaccine for Protection Against Multi-Drug Resistant Acinetobacter baumannii - Sarah Ainsworth, Patrick Ketter, Jieh-Juen Yu, M. Neal Guentzel and Bernard Arulanandam

POSTER #68
Gender Association of Intracranial Hemorrhage: Neurosurgonomics - Ross-Jordon Elliott, Ali Seifi and Marwah Elsehety

POSTER #69
INTRACRANIAL HEMORRHAGE and CEREBRAL INFARCTION: Impact of Teaching Institutions on Neurosurgonomics - Ali Seifi and Ross-Jordon Elliott

POSTER #70
INTRACRANIAL HEMORRHAGE and CEREBRAL INFARCTION: Impact of Patient’s Income on Neurosurgonomics - Ross-Jordon Elliott, Ali Seifi and Marwah Elsehety

POSTER #71
Transcription and Network Analyses of the Red Blood Cycle of the Malaria Parasite - Hao Zhang, Timothy Lilburn, Hong Cai and Yufeng Wang

POSTER #72
Reducing Blood Culture Contamination with the STERIPATH® BLOOD COLLECTION KIT - Clinton Wahl, Charlotte Lanteri Judy L. Huss, Tiffany N. Randall, and Robert Ybarra

POSTER #73
Case Series: Two Cases of MRI-Diagnosed Incarcerated Gravid Uterus Presenting as Urinary Retention - Willis Kann, Erik Connor and Ryan Newberry

POSTER #74
That’s a Rap on Heart Health - Ashley Romage and Jacqueline Riley-Baker

POSTER #75
Dispatch Accuracy Effect on Neurologically Intact Survival in Out-of-Hospital Cardiac Arrest - Julian Mapp, Christopher Velasquez and David Wampler

POSTER #76
Efficacy of a Brief Training Session for Nurses on Placement of Ultrasound-Guided Peripheral Intravenous Access - Melissa Myers, Jonathan Srichandra, Craigreon Wallace and Eric Chin
POSTER #77
Patterns and Correlates of Zolpidem Use Among US Veterans Who Served in Iraq and Afghanistan - Ramona Shayegani, Megan Amuam and Mary Jo Pugh

POSTER #78
Whole Body in vivo Imaging Studies of Acinetobacter baumannii Gastrointestinal Colonization - Holly May, Kamren Hollingsworth, Patrick Ketter, Jieh-Juen Yu, Neal Guentzel and Bernard Arulanandam

POSTER #79
Early Ambulation for Total Joint Replacement Patients - Svetlana Taylor and Tina Mask

POSTER #80
Validation of the Life After Trauma Inventory-24 with Students and U.S. Air Force Security Personnel - Mary McNaughton-Cassill, Augustine Osman, Antonio Garcia and Melina Acosta

POSTER #81
Empathetic Perinatal Education and Communication Exercise (E-PEACE) - Jacqueline Riley-Baker, Steven Sonnier and Rachel Scott

POSTER #82
“Touching” a Obstetrical Patient in a Simulated Environment - Jacqueline Riley-Baker and Debra Kilgore

POSTER #83
Prehospital Life Saving Interventions in Patients with Cardiac Arrest in a Combat Setting - A Prospective, Multicenter Study - Alejandro Medrano, Reeves Lauren, Maddry Joseph and Mora Alejandra

POSTER #84
A Prospective Analysis of Dietary Supplement Use and Associated Adverse Events Among Healthy Deployed US Service Members - Crystal Perez, Shawn Varney and Vikhyat Bebarta

POSTER #85
Implementation of Evidence Based high fidelity, interdisciplinary, in-situ training for Rapid Response Leading to a Code Blues Situation to improve quality CPR - Michelle Mandy, John Hunninghake, Gary Schofield, Christopher Mattson, Mollie Christiansen, Melinda Robbins, Leslie Wood, Thomas Kai and Cindy Wait

POSTER #86
Exploring Best Practices in Advance Care Planning - Oanh Tran, Danielle Bersabe and Jennifer Kyler

POSTER #87
3T MICU Evidence Based Practice Project to Reduce Nuisance Alarms - Amanda Rodriguez and Cassandra Bullock

POSTER #88
Are Prehospital TCCC Medication Clinical Practice Guidelines Being Followed? - Steven Schauer

POSTER #89
Graft-Implanted Tacrolimus-Eluting Hydrogels Prolong Survival After Vascularized Composite Allograft Transplantation - Renford Cindass, Shari Lawson, Kevin Wu, Vijay Gorantla and Michael Davis

POSTER #90
Using Evidence to Educate and Train Registered Nurses (RNs) in the Safe Administration of Intravenous Immunoglobulin (IVIG) - Joshua Goldberg, Marc Corpuz, Andrew Blum, Cleo Carlson, Kristen Ellis, Kayla Ellman and Summer Roush

POSTER #91
Trauma-Induced Coagulopathy in a Non-Human Primate (Rhesus Macaque) Model of Uncontrolled Hemorrhage - Antoni R. Macko, Randy F. Crossland, Darren M. Fryer, Chriselda G. Fedyk, Michael R. Scherer, M.B.A., Andrew P. Cap, and Forest R. Sheppard

POSTER #92
The Inflammatory Response Profile to a Mandibular Defect Treated with Bone Morphoeritoneal Protein-2 (BMP-2) in a Porcine Model. - Alexander J. Burdette, Kassandra Ozuna, Patricia Carlisle, Todd Silliman, Pamela Brown-baer, Rene Alvarez
SYMPOSIUM 1

UNITED STATES AIR FORCE PERSONALIZED MEDICINE AND ADVANCED DIAGNOSTICS PROGRAM PANEL: REPRESENTATIVE RESEARCH AT THE SAN ANTONIO MILITARY MEDICAL CENTER

C Dalgard¹, L Lott², T Beachkofsky², S Valtier³, T Gibbons⁴, L Petz⁵, V Sylvia², D Niemeyer²

¹Uniformed Services University of the Health Sciences, Bethesda, MD,
²59th Medical Wing, Science and Technology Division,
³59th Medical Wing Center for Advanced Molecular Detection and Clinical Research Division,
⁴59th Medical Wing Clinical Research Division,
⁵Dept of Clinical Investigations, San Antonio Military Medical Center, San Antonio Military Health System, Joint Base San Antonio, Texas

The Uniformed Services University of the Health Sciences and United States Air Force (USAF) Personalized Medicine and Advanced Diagnostics Program partnership seeks evidence to enhance support for the utilization of genetics, genomics, pharmacogenomics, proteomics, and bioinformatics (G2P) tools to optimize prevention, diagnosis, early intervention and treatment strategies at the San Antonio Military Health System (SAMHS). Panel members will describe studies in the areas of Behavioral and Psychological Health and Chronic Disease Management providing evidence for the integration of personalized data into clinical decision-making, especially during the prevention and treatment of common yet complex disorders.

Research in development of pharmacogenomics-driven predictive risk profiles will tailor the management of military patients with chronic diseases, such as Type 2 Diabetes Mellitus and Cardiovascular Disease. Furthermore, on-going research will advance our understanding the effects of gene-environment interactions for tailored treatments based on individual, social, operational and environmental risk and protective factors, such as those associated with social-occupational impairment, sleep deprivation, and resiliency. Studies in Behavioral and Psychological Health are designed with a long-term goal of providing actionable recommendations regarding strategies for promoting and maintaining the health and readiness of MHS personnel across the deployment cycle.

The Collaborative Health Initiative Research Program (CHIRP) is an interagency endeavor to promote the mutual goals of National Heart, Lung and Blood Institute (NHLBI) and the Uniformed Services University of the Health Sciences (USU). NHLBI and USU share the common vision of enhancing research on the causes, prevention, mitigation, and treatment of diseases of the heart, lungs, blood, and sleep disorders affecting the readiness of the uniformed services, the health of military families and the larger US population. The newly formed SAMHS-CHIRP partnership will directly benefit the USAF Personalized Medicine and Advanced Diagnostics Program, and enhance local utilization of G2P tools and epidemiology to innovate population level clinical management.

The Center for Advanced Molecular Detection (CAMD) maintains a genetic marker research data and tissue repository. This repository is comprised of specimens collected under Institutional Review Board approved protocols from consented subjects within the MHS, and provides an opportunity for storage of specimens and data for future research to improve military healthcare. Furthermore, laboratory infrastructure investments at CAMD and Clinical Research Division, 59th Medical Wing, and Department of Clinical Investigations, San Antonio Military Medical Center, will improve personalized medicine research capabilities for Graduate Health/Science Education program students and house staff.

Panel members will engage in discussion with attendees and address questions regarding cutting-edge personalized medicine and health research driving innovations in the care we provide our warfighters, their family members, wounded warriors and beneficiaries.
The objectives of this symposium session are to help the participants to: 1) become aware of local and state disaster management perspectives and programs, 2) learn about all-hazards response and modern disaster management, 3) understand the difference between disaster management and disaster medicine, and 4) appreciate the rich opportunities available via civilian and military collaboration and partnership.

Disaster management is a complex task and is comprised of much more than disaster medicine practice alone. In order for a community to respond effectively to a disaster, there must be a substantial amount of ongoing planning, multilateral training, and regular hands-on training amongst all partners.

Regardless of education level, socioeconomic status, race, or gender, or age, we are all susceptible to the effects of disasters. Whether man-made or natural in origin, disasters devastate the affected population and environment. This panel of experts will discuss disaster management, disaster medicine, local and state level perspectives and programs, and the inestimable value of collaborative efforts between the civilian and military communities.

It is worth noting that in 2015, there were 79 declared natural disasters in the US alone, a staggering number which does not even include industrial, terrorism, or other man-made disasters. Every disaster, no matter the cause, has immediate and longer-term impacts on the affected communities. While the direct effects of the disaster may not be completely avoidable, it is possible to manage risks, identify and address hazards, and mitigate untoward outcomes.

Enhanced awareness and multi-disciplinary education will allow improved collaboration during planning as well as during response operations. The resulting partnerships will foster information exchange, public and responder education, mitigation of negative impacts, and ultimately, cultivate community resiliency and more robust disaster response.

This panel of experts brings unique perspectives to our symposium. Several of them have first-hand experience responding to natural and man-made disasters ranging from mass casualties in the combat zone, to industrial explosions, to natural disasters, and complex emergencies. Their unique backgrounds will allow the audience to tap into the well-spring of federal, state, regional, and local experience while allowing for a direct interaction with leaders in the fields of disaster medicine and disaster management. One unique point of discussion will include the need for disaster preparedness and disaster management education for medical professionals. There is a dearth of disaster medicine training in US medical education. The time is right for the development of a core curriculum of disaster medical education, modeled on all-hazards response, and tailored to the skill level and proficiency of the participating medical professional.

The session will begin with an introduction to disasters by the moderator. Subsequently, each presenter will provide a 10 minute discussion of disaster management and disaster medicine from their own unique perspectives. The session will culminate with a question and answer session in which the audience will engage with the panel experts in case-specific or general dialogue about disaster management. The moderator will have prepared questions to initiate the discussion. Audience participation will be encouraged via anonymous real-time answering of questions using a technology application to allow the audience to “chime in” by choosing from a multiple choice menu of answers. Once the audience answers are submitted, the panel will discuss the topic and summarize the take-home points for the audience.

ACKNOWLEDGEMENTS
We would like to acknowledge the support of the Office of the Chief Scientist at the 59th Medical Wing, the San Antonio Fire Department, the University of Texas system, the Texas Department of Public Safety, and the San Antonio Uniformed Services Health Education Consortium.

DISCLOSURE
The presenters do not have any funding or other support/affiliations to disclose.
Historically, dental research that was not performed solely for the purpose of resident research to fulfill graduation requirements was only performed by the Army and Navy. The Department of the Air Force recently selected their first dental research consultant and a plan for developing a robust, meaningful dental research program is underway. This paper will discuss the evolution of the Air Force Dental Research Program and the research gaps that it proposes to address.

The Research Departments of the Army and Navy have deep roots. From 2000 to 2010 much of the Army and Navy research was performed at Great Lakes, IL. When the National Defense Authorization Act (NDAA) included Great Lakes on the Base Realignment and Closure (BRAC) list, plans for relocation to Ft. Sam Houston, TX were made. The Air Force’s Dental Evaluation and Consultation Service (DECS) was housed with the Army and Navy research programs, however, DECS’ primary mission was to perform technical evaluations of dental devices and materials to support Federal Dental Facilities. Likewise, DECS moved to Ft. Sam Houston in 2010.

In 2015 the Air Force announced that a dental research consultant would be named and that a dental research program would be initiated to address gaps in dental research that the Army and Navy did not identify. The process includes a gap analysis and associated risk analysis and capabilities-based assessment (CBA) by stakeholders. The risk analysis defines the problems that would occur if the research area is not addressed. Currently, the Air Force has identified over 24 gap areas. These areas will be prioritized and appropriate risk determinations will be made. Funding will ultimately determine how many research gap areas will be studied. Some specific research gaps include: understanding possible bioaccumulation effects of resin-based composite materials in dental water effluent; analyzing implant failures and rates in the AF population; reduction of alveolar osteitis using an aloe-based hydrogel; investigating the correlation between oral health and cardiovascular disease, Type 2 diabetes, stroke, erectile dysfunction, fatty liver disease and sleep apnea; 3-dimensional Printing and Robotics Systems applications; heads-up display in operator’s loupes to minimize patient safety errors; electronic cigarettes and their effect on oral health; fabrication of a novel self-healing restorative material; advanced application of imaging techniques in the diagnosis of dental diseases; and the long-term effects of headlamps on dental operator vision. As a force multiplier, the Air Force seeks collaboration wherever possible. Other goals are to make Air Force dental research a viable career path for officers.
SYMPOSIUM 4

EN ROUTE CARE

Maj Joseph K. Maddry, MD¹,², Jose Salinas, PhD¹, Maj James H. Lantry, MD²

¹US Army Institute of Surgical Research
²San Antonio Military Medical Center

OBJECTIVES
After completion of this seminar, the participant will be able to:
1. Discuss en route care in general and the challenges faced by the en route care provider.
2. Describe the engineering/information technology issues that are important to address in both military and civilian areas of patient critical care management. Describe the current and potential use of extracorporeal life support in the prehospital environment.
3. Identify capability and knowledge gaps and recognize areas where research can help improve care and patient outcomes.
4. Identify opportunities for collaborative relationships and joint research projects related to en route and prehospital care.

SIGNIFICANCE
En route care (ERC) is the continuation of the provision of care during patient movement to medical treat facilities and between health service capabilities. The goal is to maintain the continuum of care during evacuation or transport, without clinically compromising the patient. The capability for higher levels of intra-theater care and the use of forward surgical facilities has led to the need to transport postoperative casualties who require en route critical care. In addition, military ERC personnel frequently transport critically ill medical patients with diagnoses such as myocardial infarction and pulmonary embolus. Civilian ERC providers do not operate in a theater of war; however they transport critically ill patients with traumatic injuries and medical conditions via various platforms and sometimes in rural undeveloped settings.

Lessons learned by the military and their civilian counterparts can improve the ERC of civilian and military patients. During the conflicts in Iraq and Afghanistan many advances in combat casualty care were made and the survival rates of the combat injured dramatically advanced over the 10 year period. The Department of Defense recognizes the need to continue to build on the lessons learned and continues to fund and support research to address capability gaps.

This symposium will present three areas in ERC where capability or knowledge gaps exist and spur discussion among participants related to opportunities for joint civilian/military collaboration. Dr. Maddry will begin by defining ERC and providing the background of military en route care. He will then lead a discussion related to ERC provider types and patient outcomes. Dr. Salinas will lead a discussion related to gaps in technology to support documentation and automation of patient care. The third topic will be related to the use of prehospital and en route Extracorporeal Life Support (ECLS), also known as Extracorporeal Membrane Oxygenation (ECMO) and will be led by Dr. Lantry.

PRESENTER CONTRIBUTIONS
Dr. Maddry –Symposium Moderator– ERC, the ERC Provider and Patient Outcomes
This presentation will focus on providing general information about military and civilian ERC, including patient types, provider types and the various platforms utilized. We will discuss the association between provider type, lifesaving interventions performed and patient outcomes. In addition we will review current training requirements for ERC providers within various organizations. This presentation will also discuss future issues such as the utilization of unmanned aerial vehicles for patient transport and the advanced care of the critically ill non-trauma patient during transport.

Dr. Salinas - Information Technology Issues for the Military Critical Care Patient
This presentation will focus on describing issues and gaps with current military medical critical care approaches across different evacuation and military roles of care. We will cover the current roles of care within the DoD and the engineering/information technology issues that are important to address in both military and civilian areas of patient critical care management. We will explore the use of advanced patient dashboards for improving diagnosis and workflow of patients in an intensive care unit, as well as, the use of decision support and automation technologies for improving outcomes of the severely wounded. We will cover different aspects of information technology systems for patient care in high risk environments and discuss issues with medical device interoperability for both ground facilities as well as during ERC.

Dr. Lantry – Application of Extracorporeal Life Support (ECLS) to the Austere Environment
This presentation will focus on the use of ECLS in the combat theatre and prehospital environment under a two-fold approach: use at the point of injury and during transport. The use of ECLS at the point of injury has been successfully utilized in the combat theatre since 2005, however no effort has been made to determine the proper patient population that will most benefit from this life saving technique. The first part of the presentation will discuss the potential benefit of a simple, combat-feasible ECLS approach to managing complex injuries, which occur in combat, such as massive thoracic trauma with exsanguination. The second part of this presentation will discuss the use of ECLS in the extended transport from the combat zone to tertiary facilities in the United States. The presentation will address the impact of altitude on gas exchange and gas embol formation on both the injured patient and the ECLS circuit through various transport scenarios. The use of ECLS also has potential to benefit the civilian trauma patient in the prehospital setting and during transport.

STRUCTURE OF THE SYMPOSIUM
• Open the discussion by introducing speakers, followed by asking members of the audience what research they are performing that may relate to en route care. Advise members of the audience that they are welcome to interrupt the speakers at any time.
• Early in the discussion, point out potential areas of advanced en route care (i.e. automated systems, telemedicine, and pain management) in order to enable the audience to understand how their research may relate to en route care.
• At end of presentation, have each speaker present a slide offering potential areas of collaboration that audience members may want to participate in.
OBJECTIVES OF THE SESSION

Using results from an ongoing DoD and NIH studies as a backdrop, the objectives of the session are to:

• Describe the prevalence of co-occurring chronic pain and substance use disorder, specifically prescription-related opioid use disorder, among active duty service members

• Identify challenges and opportunities for implementing systems-level prevention and intervention initiatives in the Military Health System

• Explore treatment options for co-management of chronic pain and opioid misuse/abuse/addiction

• Provide a vehicle for discussion of research priorities in this area including a discussion of the Substance Abuse Task Area and current military research priorities in this area

The United States is experiencing a major public health crisis as a result of the dramatic rise in opioid prescriptions for chronic pain management during the last two decades. This includes a dramatic increase in opioid-related emergency department visits, poisoning deaths, opioid-related addiction treatment, and suicides.

The military is not immune increased opioid prescribing and potential adverse consequences. The 2009 Department of Defense (DoD) Survey of Health Related Behaviors among Active Duty Military Personnel revealed substantial increases in misuse of prescription drugs, attributed overwhelmingly to opioid analgesics. DoD rates were significantly higher than civilian rates of prescription drug misuse during the same period. In the Army, oxycodone and hydrocodone are the second and third most commonly prescribed analgesics.

Given the high prevalence of musculoskeletal pain, posttraumatic stress disorder, and depression in Iraq and Afghanistan military personnel post deployment, this cohort may be at increased risk for opioid misuse. In 2008, 10.1% of active duty military personnel reported misusing opioids in the prior month while 17.2% misused in the preceding 12 months. More recent survey data from a large MHS, supports these estimates. In an anonymous survey of patients presenting at an MHS emergency department (ED) and a Level 1 trauma center with an annual volume of 75,000 pts/year, 31% of active duty respondents reported opioid misuse (use of an opioid for reasons other than pain, use of an old opioid prescription for a new reason, or use of more medication than prescribed).

The session will be a combination of didactics, case study presentation, and facilitated group discussion. All didactics will draw from the peer-review literature and the presenters’ own research data. During the session, we will be distributing index cards and using social media (e.g., live Tweeting) to solicit questions from the audience for use as discussion prompts. Each presentation will be followed by a Q&A session.

PRESENTATIONS

1. Jennifer S Potter, PhD, MPH: (co-moderator) Chronic pain and opioid use risk mitigation
   Present summary of the current literature on co-occurring chronic pain and opioid use disorder and an introduction to learning objectives

2. Sandra Valtier, PhD: (co-moderator) DoD Substance Abuse Task
   Discuss the current priorities of substance abuse task area research portfolio

3. Mary Jo Pugh, RN, PhD: Opioid prescribing patterns in the US military: 2006-2014
   Report on patterns of opioid prescribing in the MHS using data from the DoD UT Health Science Center Opioid Risk Mitigation Project

4. Erin Finley, PhD, MPH: Systems level approaches to opioid risk mitigation in the MHS
   Present qualitative research findings on barriers and facilitators to implementing an opioid risk mitigation program in the MHS based on results from the DoD UT Health Science Center Opioid Risk Mitigation project

5. Donald McGeary, PhD: Behavioral pain management and reducing opioid misuse
   Describe nonpharmacological approaches to pain management that may reduce overall opioid misuse and, potentially, opioid misuse and abuse.

Funding provided by US Air Force #FA8650-15-C-658 10/2014–10/2017
The Restorative Endeavor for Servicemembers Through Optimization of Reconstruction (RESTOR™) Research Program aims to advance the science of Vascularized Composite Allo- and Auto- transplantation (VCA), immunomodulation, and Regenerative Medicine to optimize reconstructive potential for injured servicemembers. The complexity of limb and maxillofacial trauma from wartime injuries require the development of more sophisticated techniques of surgical reconstruction.

**CORE RESEARCH AREAS**

- **Vascularized Composite Allo- and auto- transplant (VCA)** research developing translational models for surgical and immunologic intervention following transplantation

- **Donor Tissue Specific Immunomodulation** research to obviate the need for chronic toxic immunosuppression in service members who are candidates for VCA

- **Clinical Vascularized Composite Allo- and Auto- transplantation** reconstructing and re-functionalizing service members with upper extremity amputations through Auto- and Allo- transplantation

- **Regenerative Medicine** combining biologic scaffolds, adult stem cells and growth factors to produce high quality composite replacement tissues, improve range of motion, scar compliance, and aesthetics of erythema and pigmentation, while decreasing scar thickness and minimizing side effects and the potential complications of treatment.

**ONGOING AND FUTURE FOCUS AREAS OF RESTOR™**

Future lines of research include identifying cutting edge cross-disciplinary strategies, technologies, tools and therapies for advanced management of combat trauma. These include but are not limited to translational and clinical aspects of immunomodulation (stem cell therapies, immunobiologics), neuroregeneration (neurobiologics) and targeted therapeutic, monitoring or diagnostic strategies in VCA (local immunosuppression, gene therapy, immunosurveillance, non-invasive molecular/multimodality imaging of rejection, ex vivo preservation techniques, immunocloaking and immunoevasion in donor grafts).

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**Lt Col Michael R. Davis**, MD, Deputy Commander, US Army Institute of Surgical Research; Director, RESTOR™ Research Program, 59MDW ST

**Sharon Lawson**, MD, Research Fellow, RESTOR™ Research Program, 59MDW ST; General Surgery Resident, UT Health Science Center at San Antonio

**CPT Renford Cindass, JR**, Research Fellow, RESTOR™ Research Program, 59MDW ST; General Surgery Resident, San Antonio Military Medical Center

**Kevin Y Wu**, MD, Research Fellow, RESTOR™ Research Program, 59MDW ST
The objectives of this symposium are for attendees to be able to
1. Recognize the basic components of the Primary Care Behavioral Health (PCBH) Model;
2. Identify at least one opportunity for interdisciplinary clinical and/or research collaboration in integrated primary care
3. Describe at least one benefit of a stepped care approach to behavioral health services

SIGNIFICANCE
The primary care setting has become the de facto mental health treatment system in the United States (Reiger et al., 1993). Most chronic health conditions (e.g. diabetes, hypertension) and behavioral health conditions (e.g. depression, anxiety, insomnia) are treated in primary care and they all require behavior change interventions for adequate treatment effectiveness. Additionally, over 50% of the psychotropic medications prescribed in the United States occur in the primary care setting. Thus, the importance of implementing whole-person healthcare, including integrated behavioral health providers, is essential in providing optimal care for primary care patients. The Primary Care Behavioral Health (PCBH) model as described by Robinson & Reiter (2007; 2016) has been successfully implemented in military settings for over two decades and is implemented at the VA and more recently at UTHSCSA. PCBH model implementation involves embedded Behavioral Health Consultants in primary care settings who provide brief, behaviorally-focused treatment within primary care and/or triage the patient to an appropriate level of care to restore or maintain the patient’s level of functioning. This type of integrated behavioral health care has policy change implications with the potential to transform primary health care on a global scale.

PRESENTATION/STRUCTURE
Dr. Kanzler will briefly introduce the presentation and explain the PCBH model. Dr. Ogbeide will present an overview of the implementation of the PCBH model. Dr. Kanzler will then highlight key empirical and collaborative aspects of PCBH in military and civilian settings. Maj Najera will present the results of a 1-year pilot study of stepped care model using the PCBH model for behavioral health services at 3 Air Force medical facilities. Dr. Kearney will serve as our moderator to facilitate discussion, particularly focusing on enhancing collaborations across San Antonio. We will use several strategies to ensure attendee interaction and participation, including small group discussion, Q&A with the presenters, and targeted participant “polls” throughout the symposium.

KEYWORDS
1. Primary Care
2. Behavioral Health
3. Integrated Health Care

Focused Areas/Learning Track(s): Policy, Practice, and Collaborations
SYMPOSIUM 8

HIGH STAKES SUMMATIVE ASSESSMENT TO DETERMINE NURSING COMPETENCY

Michelle R. Mandy, MPA, BSN, Gary L. Schofield Jr, MSN, BSN, Scott A. Strater-Tafolla, MSN, BSN, Sharon M. Solomon, MHA/MSN, BSN.

San Antonio Military Medical Center, Joint Base San Antonio, Fort Sam Houston, Texas

DESCRIPTION

This symposium examines the concept of using simulation as one of the summative assessment tools for High Stakes Testing of nursing competency. An organization will discuss processes, assessment plans, strategies, challenges, and lessons learned by incorporating simulation into high stakes assessment at the macro levels into their nursing competency programs. Imagine having a clear vision of what high stakes testing in healthcare is today, and how to define it for your organization.

LEARNING OBJECTIVES

Upon completion of the course, participants should be able to:
1. Define High Stakes testing for their organization.
2. Identify two barriers to implementing high stakes test for nursing skills competency.
4. Describe one method in which High Stakes Simulation Testing could be incorporated into their organization.
5. Discuss the process of vetting validators for High Stakes Simulation Testing.

SYMPOSIUM CONTENT

High Stakes testing is defined as “any test that has major consequences or is the basis of a major decision” (AERA, 2000, p. 1). In healthcare, High Stakes are the consequences placed on the outcomes (e.g., patient safety, reputation, accreditation, etc...) determined by the stakeholders. The use of summative assessment utilizing simulation is considered high stakes as it relates to the protective relationship that has been embraced by the nursing profession. In 2012 the NLN Board of Governors has been addressing the concept of High Stakes in nursing competencies and states, “there is no debate about the need to protect the public through standardized evaluation measures of nursing competence” (p. 1).

The “High Stakes” at each of our facilities are uniquely different but the use of simulation as summative assessment is very similar. These “benchmarking” programs will allow the participants to explore their high stakes and provide you with the cognitive and psychomotor skills assessment techniques.

You will explore a new take on a controversial topic High Stakes and understand innovative methods of using simulation for competency assessment, which will enhance both your personal success as well as overall organizational success.

“The view(s) expressed herein are those of the author(s) and do not reflect the official policy or position of Brooke Army Medical Center, the U.S. Army Medical Department, the U.S. Army Office of the Surgeon General, the Department of the Army or the Department of Defense or the U.S. Government.”
BACKGROUND
Staff did not feel empowered to report near miss events thus ZERO were reported in 2013. The purpose of our project was to evaluate if participation in evidenced based near miss reporting impacted patient safety.

MATERIALS & METHODS
Using the Iowa model, a focused question was developed and a literature review completed. Leader engagement in the promotion of patient safety activities included establishing stepwise goals for no patient falls, recognizing staff with the most near miss reports submitted, building an awareness to the benefits of reporting a near miss, reviewing near misses and actual events to identify areas for improving interventions, and role-modeling positive reporting benefits through encouraging open door access to leadership (Frankel…2006). A form was developed to track actual events capturing the moment in time that reflected the surrounding environment. The data from the form was used to inform a flow algorithm based on Just Culture evidence to guide how each situation would be handled by leadership: console, coach, or punish (justculture.org).

RESULTS
There was noticeable improvement as the ward stood out for reporting 165 near miss events over the past year with 63 in the last quarter. From the 165 near miss events, 23% were related to fall prevention, 39% were related to physician orders, 21% were related to nursing process, 9% were related to pharmacy issues, 5% were related to 2 patient ID, and 3% were related to communication. Increased reporting has resulted in decreased falls and increased the number of near miss reports improving the culture of reporting. From June 2013 to May 2014, the fall rate per 1000 patient care days was 0.96% and decreased to 0.69% from June 2014 to May 2015. The ward was awarded the inpatient commander’s cup for their team efforts in the promotion of patient safety.

CONCLUSIONS
Increasing the culture of reporting near misses should be incorporated into daily practice because such events are precursors to actual errors. Near miss reporting identifies causes of the events and opportunities for health system improvements (Mick…2007). Staff’s participation in reporting potential errors is critical to a healthcare organization’s patient safety process (Leape 2002).

ACKNOWLEDGEMENTS
I would like to acknowledge my awesome nursing staff, the CNSCI staff (LTC Dickenson and Ms. Lazarus), and CPT Christiansen.

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FOCUS AREA:
PRE-HOSPITAL TRAUMA
AND EN ROUTE CARE

BEXAR ROOM (HUC 1.102)
PATIENT HANDOVER FROM EMERGENCY MEDICAL SYSTEM STAFF TO EMERGENCY DEPARTMENT STAFF: HOW ARE WE DOING? A PRELIMINARY ANALYSIS

Lauren K. Reeves, BS¹, Alejandra G. Mora, BS¹, Shelia C. Savell, PhD RN¹, Maj Joseph Maddry, MD¹,²

¹Air Force En route Care Research Center/59th MDW/ST, US Army Institute of Surgical Research, ²Department of Emergency Medicine, San Antonio Military Medical Center

BACKGROUND

Medical Evacuation (MEDEVAC) personnel are tasked to provide medical transport of up to 4 patients and provide a report to clinicians at the receiving facility. To date, MEDEVAC documentation has been limited and little research has been conducted in evaluating handoff procedures between en route care (ERC) personnel and receiving medical treatment facilities (MTFs).

In January 2016 the Southwest Texas Regional Advisory Council (STRAC) implemented a standardized EMS to MTF handoff report. In collaboration with STRAC, En route Care Research Center (ECRC) staff conducted a pre-implementation survey of ED staff in December 2015. The study objective is to understand current handover communication and documentation as reported by emergency department clinicians.

METHODS

A survey was conducted in the SAMMC Emergency Department as a performance improvement project. Clinicians were provided with a ten-item five-point likert scale questionnaire (1, never; 2, rarely; 3, sometimes; 4, often; 5, always). Clinicians were grouped as Physicians (MD/DO/PA), Nurses (RN/LVN), and Other (Medic/Medical Student). In addition to duty position and section, we collected the number of years in current position and facility for each respondent. Each question was evaluated and response rates were reported. Subsequently, questions were analyzed and compared by provider type. Chi-square tests were performed and data reported as percentages.

RESULTS

Respondents were Nurses (59%), Physicians (36%), and Other (5%). Most clinicians had been in current SAMMC ED position for less than five years (85%). Over 80% of clinicians they understood patient mechanism of injury/ history of present illness and the signs and symptoms conveyed by EMS with no difference when comparing Physicians and Nurses. Forty percent of clinicians reported that assessment findings and prehospital treatments were conveyed “sometimes”. Nurses were more likely to report that Red/Blue Trauma Alert Criteria were conveyed in comparison to physicians (p<0.05). The majority of clinicians (67%) reported having to interrupt the EMS report at least sometimes (sometimes, often, always combined). Physicians were more likely to interrupt the EMS report compared to nurses (p<0.05). Clinicians (62%) reported sufficient time “always” was to relay pertinent patient information. Clinicians felt positive about overall patient handoff experience: always, 12%; often, 53%; and sometimes, 29%. A total of 65% of clinicians reported that they had not received any special training related to EMS to ED patient handoff process.

CONCLUSION

While clinicians reported sufficient time for EMS to communicate patient information, less than half (40%) of clinicians indicated that assessments and pre-hospital treatments were conveyed and majority (67%) of clinicians reported interrupting EMS report for clarifications. A copy of the prehospital record is only received (“always”) 12% of the time. Furthermore, more than half (65%) of clinicians have not received EMS to ED patient handoff training.

KEY WORDS
Handoff, EMS report, prehospital documentation, prehospital trauma

ACKNOWLEDGEMENTS
Department of Emergency Medicine, San Antonio Military Medical Center
PRESENTATION 2 | PRE-HOSPITAL TRAUMA AND EN ROUTE CARE

DOES EXPERIENCE MATTER? PARAMEDIC CODE VOLUME EFFECT ON OUT OF HOSPITAL CARDIAC ARREST OUTCOMES

N Weiss², E Ross⁴, C Cooley¹, J Polk¹, C Valasquez³, S Harper⁴, B Walrath⁴, T Redman⁴, J Mapp⁴, and D Wampler¹.

¹University of Texas Health Science Center at San Antonio, Department of Emergency Health Sciences, Office of the Medical Director, San Antonio, 78229, United States.
²San Antonio Military Medical Center, Department of Emergency Medicine, San Antonio, 78219, United States.
³San Antonio Fire Department, San Antonio, 78229, United States.
⁴San Antonio Uniformed Services Health Education Consortium, EMS & Disaster Medicine Fellowship, San Antonio, 78219, United States.

BACKGROUND
Outcomes of Out of Hospital Cardiac Arrest (OHCA) are influenced by many factors. We postulate that paramedics who have participated in a greater number of OHCA resuscitations will have improved patient outcomes when compared to paramedics who participated in fewer resuscitations.

METHODS
We conducted a retrospective analysis of prospectively collected data abstracted from the cardiac arrest database of a large urban EMS system. All OHCA cases where resuscitation was attempted during the year 2014 were reviewed. Our outcome of interest was the rate of sustained ROSC, which is defined as ROSC for 5 continuous minutes or greater. The paramedics involved were dichotomized into those with participation in <10 and ≥10 total annual resuscitations. The rate of sustained ROSC was calculated from cases when paramedics served in the role of lead medic. These rates were then analyzed using the Chi Square test.

RESULTS
1,146 cases of OHCA met criteria for inclusion in this study. A total of 343 paramedics participated in at least one cardiac arrest in 2014. The median number of resuscitations was 10 with a range from 1 to 26 resuscitations. Paramedics who participated in <10 OHCAs (120/343) had a sustained ROSC rate of 22.3% for resuscitations in which they were the lead medic, while those who participated in ≥10 OHCAs (223/343) had a rate of 28.8% (p-value = 0.048). A subgroup analysis of cases of Utstein style arrests (non-traumatic, witnessed cardiac arrest with initial rhythm of ventricular fibrillation or pulseless ventricular tachycardia) showed no statistically significant difference in the groups (p-value = 0.5814).

CONCLUSION
Paramedics who participated in ≥10 OHCA resuscitations had a statistically significant higher rate of achieving sustained ROSC when they were functioning as lead medic. This data suggests that if paramedics participate in a minimum of ten resuscitations per year, there are improved outcomes when looking at sustained ROSC as an endpoint. This highlights the importance of maintaining accurate logs of EMS provider OHCA participation as well as the need to provide additional training to paramedics who do not participate in an annual minimum of OHCA resuscitations.
OKINAWA EMERGENCY MEDICAL SERVICES SYSTEM: IS AN UPGRADE TO ADVANCED LIFE SUPPORT WARRANTED?

**BACKGROUND**

The island of Okinawa is a critical strategic base of operations in the execution of the joint forces Pacific Strategy, hosting over 55,000 active duty service members and their dependents on and around 13 Department of Defense facilities representing all four services over 877 square miles. US Naval Hospital Okinawa (USNHO) and Marine Corps Installations Pacific (MCIPAC) work in collaboration with the USAF 18th Medical Group at Kadena Airbase to provide Emergency Medical Services (EMS) for military beneficiaries on the island. The EMS system first responders are nationally registered Emergency Medical Technicians (EMT) who provide evaluation, treatment, and transport to the USNHO Emergency Department or local hospital emergency departments as dictated by the urgency of the patient condition. Medical oversight, including direct and indirect supervision, is provided by the Emergency Medicine (EM) physicians at USNH Okinawa. Beyond the traditional EMS rotation during EM residency, the system medical director receives no formal training in medical direction or EMS. Neither the Department of Defense nor the civilian EMS community have recognized objective criteria to determine what is the appropriate level of prehospital care (ALS v. BLS) for a given EMS system for a given community.

**OBJECTIVES**

Evaluate the need for an upgrade to the Okinawa EMS system to Advance Life Support (ALS) level of care.

**METHODS**

A retrospective review of the Okinawa EMS system’s run reports from 2011-2014 was conducted. Total number of runs, number of pre-hospital deaths, and percentage of critical care transports per year are reported. Case definition for critical care transports was patient with critically abnormal vital signs or requiring life-saving intervention (LSI) to maintain airway, breathing, circulation, or neurologic function. Percentage of transports where ALS response was indicated based on chief complaint was also reported for 2014. Chief complaint categories included neurologic, cardiac, respiratory, and toxic ingestion where a prehospital ALS intervention might be required.

**RESULTS**

From 2011-2014, 1345 ±137 patients were transported annually. By year, the total volume was 1383 in 2011, 1148 in 2012, and 1383 in 2013, and 1467 in 2014. Prehospital deaths by year were 10, 5, 3, and 5 respectively from 2011 - 2014. Critical care transports accounted for by year were 10 (0.7%), 5 (0.4%), 3 (0.2%), and 5 (0.3%). An ALS provider would have been dispatched on 558 EMS runs (38%) in 2014 had they been available based on chief complaint.

**CONCLUSION**

Using the 2014 prediction of 38% ALS dispatches based on chief complaint, we recommend a hybrid system using 1/3 ALS providers and 2/3 BLS providers strategically placed across the island to maximize coverage. Thus, 2 of the 6 Navy EMS stations should be ALS. We also recommend the US Air Base Kadena EMS station be upgraded to ALS level of care. Without objective criteria to evaluate EMS systems and to determine appropriate level of prehospital care, it is difficult to provide evidence-based recommendations for the Okinawa EMS system.
EVACUATION OF COMBAT PATIENTS BY MILITARY CRITICAL CARE AIR TRANSPORT TEAMS WITH A RESTRICTED TRANSFUSION APPROACH IS SAFE

Maj Joseph Maddry, MD¹, Shelia Savell, PhD, RN¹, Alejandra G. Mora¹, and Vikhyat S. Bebarta, MD³

¹Air Force En route Care Research Center/59th MDW/ST, US Army Institute of Surgical Research,
²Department of Emergency Medicine, San Antonio Military Medical Center,
³University of Colorado, School of Medicine

BACKGROUND
Military Critical Care Transport Teams (CCATT) rapidly evacuate critically ill and injured patients out of theater for tertiary treatment. Many of these patients have experienced hemorrhage secondary to traumatic injury and may have marginal hemoglobin (Hgb) levels. There is concern that aeromedical evacuation puts patients at risk for altitude induced hypoxemia and that patients with marginal Hgb levels are at increased risk. Civilian critical care data supports a restricted transfusion policy and recommends only administering blood for a Hgb > 7 g/dl, when the patient is symptomatic. The purpose of this study was to compare short term and 30 day patient outcomes of CCATT patients evacuated out of theater with a Hgb ≤ 8 g/dl to those with a Hgb > 8 g/dl.

OBJECTIVES
Evaluate the need for an upgrade to the Okinawa EMS system to Advance Life Support (ALS) level of care.

METHODS
We conducted an IRB approved, retrospective medical record review of all traumatically injured patients evacuated from theater by CCATT between March 2007 and December 2011. We recorded demographics, injury descriptions, vital signs, and labs. We obtained outcome data including predefined complications, procedures, and mortality/hospital discharge status at 30 days. Patients were separated into pre-flight Hgb ≤ 8.0 g/dl vs. > 8.0 g/dl. Continuous data were analyzed using Student’s t-tests or Wilcoxon tests when appropriate and reported as mean±SD. Chi-square or fisher’s exact tests were performed as appropriate for categorical variables. Stepwise, multifactorial regression models were employed to assess associations between demographics, injury, and outcomes. Statistical significance was set at p<0.05.

RESULTS
Of 1,257 enrolled 219 had a pre-flight Hgb ≤ 8.0 and 1,033 had a Hgb > 8.0. Groups were similar in age and gender proportions. Injury Severity Scores (ISS, 24 SD±12.6) were similar and the low Hgb group had more blast injuries (76% vs. 68%, p=0.01). Pre-flight vital signs, post-flight vital signs and lab values were similar. In regression model analysis no associations were identified between pre-flight hemoglobin levels and adverse outcomes. Mortality and discharge status at 30 days were similar.

CONCLUSION
CCATT patients with Hgb ≤ 8 g/dl had similar adverse outcomes and mortality at 30 days as compared to patients with a Hgb > 8 g/dl. Therefore patients transported with a Hgb ≤ 8 g/dl did not incur additional risks.

KEYWORDS
En route care, CCATT, anemia, trauma, transfusion

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The opinions expressed on this document are solely those of the author(s) and do not represent an endorsement by or the views of the United States Air Force, the Department of Defense, or the United States Government.
FOCUS AREA: INPATIENT AND OUTPATIENT CARE

MESQUITE ROOM (UC 2.01.24)
A PROPOSAL FOR PROVIDER COMPETENCIES IN SUICIDE TREATMENT

Major Michael D. Farjellah, PhD
Warrior Resiliency Program, Regional Health Command – Central

BACKGROUND
Over 40,000 Americans die by suicide every year and it is the tenth leading cause of death.1 Suicide rates in the military are even higher than the general population.2 This paper presents a proposal for the practical need to develop core competencies in the treatment of suicide in order to provide behavioral health providers a better understanding of how to help suicidal people.

METHODS
A thorough literature review was conducted of random controlled trials (RCTs) of the major suicide therapies and frameworks. Many have demonstrated promising results in reducing suicide attempts and self-directed violence including Cognitive-Behavioral Therapy (CBT), Dialectical Behavioral Therapy (DBT), Mentalization-Based Therapy (MBT), Collaborative Assessment and Management of Suicide (CAMS), and Interpersonal Therapy (IPT) among others.

RESULTS
Although the aforementioned RCTs represent important work in gaining a deeper understanding of effective suicide prevention strategies, research gaps and methodologic concerns limit conclusions that can be drawn from these studies.3 While all these suicide therapies and frameworks demonstrate effectiveness in reducing suicidal behavior, their common and differentiating features are unspecified. As a result, there is no consistent or agreed upon necessary and sufficient criteria. Subsequently, no established provider competencies exist for the treatment of suicidal concerns.

CONCLUSION
In an effort to develop provider competencies, the Psychodynamic Diagnostic Manual (PDM),4 which was intended as a psychoanalytically-oriented complement to the Diagnostic and Statistical Manual for Mental Disorders (DSM-V) outlines healthy personality functioning. Examples of healthy personality are to: 1) view self and others in complex, stable, and accurate ways (identity), 2) maintain intimate, stable, and satisfying relationships (object relations), 3) experience affect tolerance, 4) regulate impulses and emotions using defenses and coping strategies, 5) function according to consistent and mature moral sensibility and overcome moral injury, 6) appreciate conventional notions of what is realistic (reality testing), and 7) respond to stress resourcefully and to recover from painful events without undue difficulty (ego strength and resilience).4 The lack of any of these components of healthy personality would suggest a vulnerability to psychopathology and possible suicidal impulses. When examining the range of suicidal prevention therapies, none outline provider competencies to address and deal with potential suicidal vulnerabilities. Therefore, provider competencies in suicide prevention therapy should be established to provide a framework to guide clinicians in this important area.

TOPICAL ETHYL CHLORIDE TO REDUCE PAIN ASSOCIATED WITH VENOUS CATHETERIZATION: A RANDOMIZED CROSS-OVER TRIAL

Kurt Fossum, EMPA-C, DSc, Sue L. Love, EMPA-C, DSc, Michael D. April, MD, DPhil, MSc

BACKGROUND
Intravenous catheter placement is routinely performed in the Emergency Department setting and is often painful and a source of distress to patients who have to undergo this procedure. A rapid, cost-effective way of significantly reducing the pain and therefore the anxiety associated with this essential procedure has practice-changing implications for the EM provider.

OBJECTIVE
To compare pain associated with venous catheterization following administration of topical ethyl chloride versus placebo among emergency department (ED) healthcare providers.

METHODS
We conducted a randomized, double-blind, placebo-controlled, cross-over trial among a convenience sample of healthcare provider volunteers in a tertiary-care urban ED. We randomly allocated subjects to initial treatment (ethyl chloride versus sterile water aerosol spray) and catheterization site (left or right antecubital fossa). After venous catheterization placement and discontinuation subjects underwent a 5-minute washout period. All subjects then underwent venous catheterization in the contralateral antecubital fossa following administration of the alternative agent. We measured all outcomes after discontinuation of the second catheter. The primary outcome was difference in pain verbal numeric rating scale (VNRS) score (0-10) between the two agents. Secondary outcomes included preferred agent (binary) and future willingness to use agent on patients (5-point Likert scale).

RESULTS
Thirty-eight healthcare providers were recruited; all completed the study. Median pain VNRS scores were 4 (interquartile range 2-5) for placebo versus 2 (1-4) for ethyl chloride. The effect size for pain reduction with ethyl chloride compared to placebo was 2 (95% confidence interval 0.5 to 2, p=0.001). A majority of subjects (68.4%) preferred ethyl chloride to placebo. Five-point Likert scale scores measuring willingness to use preferred product on future patients was higher by 2 (95% confidence interval 1 to 3) among subjects preferring ethyl chloride versus placebo.

CONCLUSIONS
We found that topical ethyl chloride yields a greater reduction in pain associated with venous catheterization compared to topical placebo.
A PROPOSAL FOR TREATMENT CONSIDERATIONS FOR MILITARY WOMEN WITH POSTTRAUMATIC STRESS DISORDER SUBSEQUENT TO MILITARY SEXUAL TRAUMA

Major Shamecca M. Scott, PsyD, ABPP
Warrior Resiliency Program, Regional Health Command – Central

BACKGROUND
The history of women serving in the United States military dates back as early as the Revolutionary War. Initially, women’s roles were in nursing, cooking, and sewing. A recent shift in the zeitgeist has resulted in women serving in roles that were once dominated by men (e.g., truck drivers, pilots, and mechanics). In July 2015, two female soldiers were recognized as the first females to complete the Army’s Ranger School, one of the Army’s elite training schools. Although some may regard these changes as landmark achievements, consideration should be given to the negative consequences women may be subjected to as a result of working in male dominated professions (Hugh et. al, 2010). During the past decade there has been an increase in Soldiers diagnosed with posttraumatic stress disorder (PTSD) subsequent to military sexual trauma (MST); (Scott et. al., 2014; Conard, Hogan, & Armstrong, 2014; Fraser, 2011; Wing & Oertle, 1999). According to Suris and Smith (2011), the prevalence rate for female veterans exposed to sexual trauma was 21.9% during a 2009 Veteran’s Administration national screening. In an effort to address this emerging issue, the Department of Defense became more aggressive in its approach to educate and provide treatment for Service Members diagnosed with PTSD subsequent to MST.

METHODS
A comprehensive literature review was conducted to investigate whether gender differences exist for individuals diagnosed with PTSD as a consequence of MST. According to the literature, women are twice as likely as men to develop PTSD and more likely to experience sleep disturbance such as poor sleep efficiency, reduced total sleep time, and more wake after sleep onset (Calhoun et. al, 2007 & Kobayashi & Mellman, 2012). According to Calhoun et al. (2007), Objective Evidence of Sleep disturbance in Women with Posttraumatic Stress Disorder. Journal of Traumatic Stress, 20 (6), 1009-1018. doi:10.1002/jts.20255

RESULTS
Research suggests that there are gender differences for individuals diagnosed with PTSD subsequent to MST. Conversely, the literature is limited in purporting effective treatment modalities (e.g., group therapy treatment specifically for women) specifically tailored for military women diagnosed with PTSD as a result of MST.

CONCLUSION
Research has established evidence-based treatments such as Prolonged Exposure (PE), Cognitive Processing Therapy (CPT), Cognitive-Behavioral Therapy for Insomnia and Nightmares (CBT-IN), and Eye Movement Desensitization Reprocessing (EMDR) as top tier treatments for PTSD. The literature has also established that women experience different symptoms in comparison to men who are diagnosed with PTSD. Given the aforementioned it is incumbent upon behavioral health providers to be cognizant of gender differences when treating individuals diagnosed with PTSD, especially women. Thus, the scope of this presentation will review important gender differences in PTSD and treatment considerations for working with women diagnosed with PTSD subsequent to MST. Potential implications for future research will also be discussed.

IDENTIFYING STAFF-LEVEL CORRELATES AND FACTORS OF NURSING TEAMWORK IN A MILITARY HOSPITAL

LTC Carla Dickinson, PhD

Center for Nursing Science and Clinical Inquiry, San Antonio Military Medical Center

BACKGROUND
Despite a system wide focus on team STEPPS training, the perception of teamwork is lower in military hospitals than in civilian hospitals (DoD, 2014). Furthermore, lower perceptions of teamwork in military hospitals have persisted over the past 10 years. Studies of nursing teamwork indicate that characteristics of the nursing staff may influence nursing teamwork (Kalisch & Lee, 2009; Kalisch & Lee, 2013). Military nurses are more likely to be male, have expanded roles, and have less experience than civilians (Patrician et al., 2010). The military is a hierarchical organization and each military service has a unique mission, which may further influence nursing teamwork. However, little is known about nursing teamwork in military hospitals and what staff (gender, nursing role, experience, absenteeism, staffing adequacy) and military characteristics (personnel category, service affiliation, pay grade, and perception of leadership behavior) are associated with nursing teamwork in this setting.

MATERIALS AND METHODS
This conceptually driven cross-sectional study using survey methodology was used to identify correlates and factors of nursing teamwork from a convenience sample of approximately 703 nursing staff of 15 patient care units at a large military hospital resulting in a 32.3% return rate. After exclusion of 39 incomplete surveys, the final sample size for data analysis was 185 surveys.

Multiple regression analysis was used to explore factors of nursing teamwork from staff characteristics and military characteristics. Leadership behavior was calculated as a composite score and as leadership factor scores (leading and being a member). Separate regression models for the leadership composite score and leadership factor scores (leading and being a member) were built.

RESULTS
The findings indicated that regression models were significant at p < .001, and explained 45% to 48% of the variance in nursing teamwork. The significant variables for the models were nursing role, staffing adequacy, personnel category, and leadership behavior. Leadership behavior alone explained about 40% of the variance in nursing teamwork. A variety of leadership behaviors are important for nursing teamwork. Nurse managers may be able to improve teamwork on patient care units by adapting their leadership behaviors to mitigate short term staffing deficiencies and differences attributable to individual characteristics.

CONCLUSIONS
A variety of leadership behaviors are important for nursing teamwork. Nurse managers may be able to improve teamwork on patient care units by adapting their leadership behaviors to mitigate short term staffing deficiencies and differences attributable to individual characteristics.

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DISCLAIMER
The view(s) expressed herein are those of the author(s) and do not reflect the official policy or position of Brooke Army Medical Center, the U.S. Army Medical Department, the U.S. Army Office of the Surgeon General, the Department of the Army, and Department of Defense or the U.S. Government. Brooke Army Medical Center IRB

KEYWORDS
Teamwork, leadership, staff characteristics
FOCUS AREA: BIOMEDICAL RESEARCH

TRAVIS ROOM (HUC 2.202)
Many environmental acne disorders including chloracne and oil acne were previously thought to occur predominantly in occupational settings following polycyclic aromatic hydrocarbon exposure. Cigarette smoke has also been shown to contain a large number of these toxic polycyclic aromatic hydrocarbon components and strictly correlates with non-inflammatory acneiform lesion development in post-adolescent patients. We report a case of localized open comedones associated with occluded cigarette smoke exposure near the nasal cavity due to infrequently changed gauze following rhinectomy. Dermal uptake of organochlorines (including dioxins) and other polycyclic aromatic hydrocarbon components in cigarette smoke has the potential to function as a contributing factor in the development chloracne and other acneiform disorders. Dioxins constitutively activate aryl hydrocarbon receptors in the skin and facilitate the preferential differentiation of sebaceous gland progenitor cells into epithelial fates resulting in comedone formation. Several of these environmental and non-inflammatory acne subtypes may share this common molecular propensity for enhanced comedogenesis which likely occurs through the LRIG1-regulated alteration of normal keratinocyte-like developmental pathways via the aryl hydrocarbon receptor signaling cascade. Additional studies are needed to further elucidate the exact mechanistic pathways through which tobacco smoke impacts the integumentary system.

The views expressed herein are those of the authors and do not reflect the official policy or position of San Antonio Military Medical Center, the U.S. Army Medical Department, the U.S. Army Office of the Surgeon General, the Department of the Army, Department of the Air Force, or U.S. Government.
DAMAGE-ASSOCIATED MOLECULAR PATTERNS (DAMPs) AND THE INFLAMMATORY RESPONSE IN SEVERELY INJURED PATIENTS

S.E. Nicholson*, D. Merrill, M. Rani*, A.M. Lewis, B.J. Eastridge and M.G. Schwacha*

Department of Surgery, The University of Texas Health Science Center at San Antonio, TX

BACKGROUND
Cellular injury from trauma generates intracellular molecules called damage-associated molecular patterns (DAMPs) that are released into the circulation with cell necrosis. DAMPs interact with immune cells via specific receptors including toll-like receptors (TLRs) to activate the innate immune response. Dysregulation of the immune system following injury may increase inflammation and contribute to complications and worse outcome. The objectives of this ongoing prospective, observational study are: 1) to characterize the expression of circulating DAMPs in severely injured patients admitted to the surgical intensive care unit (SICU) and 2) to determine the immunoinflammatory status in trauma patients.

METHODS
Whole blood was collected from severely injured patients (n = 12) admitted to the SICU on arrival to the emergency department (ED), and subsequently at 24 hrs, 3 days and 7 days after admission. Healthy volunteers were also enrolled (n = 10). DAMP levels (cytochrome C, HMGB1 and S100A8) in plasma were assessed at each time point and cells were assessed for immune cell phenotypes using flow cytometry. Clinical outcomes including length of stay, ICU days, ventilator days, and mortality were determined.

RESULTS
The mean values for injury severity score (ISS), hospital length of stay, ICU length of stay and ventilator days were 21.8, 20.1, 12.3 and 5.8, respectively. There was one death. S100A8 was increased on admission and remained elevated through 7 days post-injury compared to healthy controls. HMGB1 was also elevated on admission, but decreased to control levels by 24 hrs. Virtually all monocytes (CD11b+CD14+) from both healthy volunteers and subjects expressed TLR2. In patients a 3-fold decrease in TLR2 expression on a per cell basis was observed by day 7. TLR4 expression was negligible in both populations.

CONCLUSIONS
DAMPs were elevated 24 hrs after injury with S100A8 demonstrating sustained elevations through 7 days post-injury. Elevated admission levels of S100A8 and HMGB1 also appeared to be associated with increased length of stay. Downregulation of monocyte TLR2 expression was associated with elevated circulating DAMPs, suggesting that under such conditions the innate immune response is suppressed increasing susceptibility to infection.
PHASE II U-2 STUDY - SINGLE EXPOSURE TRIAL: FINDINGS AT 1 YEAR

Jeremy Bernot¹,²,⁵ Paul Sherman¹,² Stephen McGuire¹,³ and Peter Kochunov⁴

¹U.S. Air Force School of Aerospace Medicine, Aeronautical Research Department, Wright-Patterson AFB, OH, ²Department of Neuroradiology, Wilford Hall Ambulatory Surgical Center, Joint Base San Antonio, TX, ³Department of Neurology, Joint Base San Antonio, TX, ⁴Department of Psychiatry, University of Maryland School of Medicine, Baltimore, MD. San Antonio Uniformed Services Health Education Consortium (SAUSHEC)

INTRODUCTION

Our goal is to characterize the pathophysiologic response of the brain to high altitude exposure to understand its association with previously demonstrated subcortical white matter injury. A single exposure to a hypobaric environment (7,620 m [25,000 ft]) with or without hypoxia induces transient magnetic resonance imaging (MRI) changes in addition to changes in inflammatory biomarkers.

METHODS

This study was approved by the 59th Medical Wing Institutional Review Board. Four study limbs were established to include 1) hypobaric and hypoxic [initial altitude chamber training]; 2) hypobaric, non-hypoxic [inside observer altitude chamber technicians]; 3) hypoxic, non-hypobaric [reduced oxygen breathing device, aircrew refresher training]; and 4) normal controls without hypobaric or hypoxic exposure. MR imaging was performed on a 3-T Siemens Verio magnet 1 d prior, 1 d post, and 3 d post exposure. MR protocol included axial magnetization-prepared rapid gradient-echo sequences, magnetic resonance spectroscopy with TE of 30 and 135 within the frontal white matter and anterior cingulate gyrus, diffusion tensor and Q-space imaging, arterial spin labeling perfusion imaging, and 3-dimensional fluid-attenuated inversion recovery images. Phlebotomy was performed prior to MRI #1, immediately prior to and post altitude chamber or hypoxic exposure, and prior to MRI #2 and MRI #3. Laboratory analyses included S100B, tumor necrosis factor alpha, interleukin-6, interferon gamma, and microparticle analysis. Control patients underwent the five blood draws at equivalent times during the day as the other three study limbs.

RESULTS

At 1yr, 75 subjects have been imaged, (46 from limb 1, 8 from limb 2, 3 from limb 3, and 18 from limb 4). MRI demonstrates an increase in cerebral blood flow to white matter 24 h after altitude chamber exposure in addition to an up-regulation of glutamate/glutamine in the anterior cingulate gyrus. Laboratory analyses demonstrate a correlation with MRI quantitative changes and S100B. Microparticle data are inconclusive at this time.

DISCUSSION

MRI results suggest that a single altitude exposure to 7,620 m (25,000 ft) results in an increased metabolic demand on the brain and oxidative stress and a potential neuroinflammatory process. Further assessment of microparticle data and potential platelet-neutrophil interactions is required. Quantifying the effects of a single hypobaric exposure on the brain may result in identification of the pathophysiology of hypobaric-associated subcortical white matter injury.
PREDICTING SUCCESS OF PRELIMINARY SURGICAL RESIDENTS: A MULTI-INSTITUTIONAL STUDY

Mohammed J Al Fayyadh, MD¹, Stephanie F Heller, MD², Taufiek K Rajab, MD³, Aimee K Gardner, PhD⁴, Jordan P Bloom, MD⁵, Jeremy A Rawlings, BS¹, Douglas S Smink, MD³, David R Farley, MD², Ross E Willis, PhD¹, Daniel L Dent, MD¹

¹University of Texas Health Science Center at San Antonio, Department of Surgery, San Antonio, Texas; ²Mayo Clinic, Department of Surgery, Rochester, Minnesota; ³Brigham and Women’s Hospital, Department of Surgery, Boston, Massachusetts; ⁴University of Texas Southwestern, Department of Surgery, Dallas, Texas; ⁵Massachusetts General Hospital, Boston, Massachusetts

PURPOSE
A non-designated preliminary surgery (NDPS) position encompasses one year of training provided by many general surgery residencies across the country to medical school graduates. Some have criticized these positions as nothing more than “indentured servitude” while others have suggested the training year is a “golden opportunity”. Our aim was to assess factors predicting success, with the goal of providing evidence for program directors to support career development guidance to preliminary residents.

METHODS
A retrospective cohort study of 206 NDPS residents who entered four university-based institutions were identified from 2009-2013. The records for trainees were reviewed for medical school of origin, US Medical Licensing Exam (USMLE) scores, American Board of Surgery In-Training Exam (ABSITE) percentile scores, career goals, and ultimate placement. We defined primary success as obtaining a categorical position in the specialty of choice and secondary success as obtaining a categorical position in any specialty immediately after finishing their NDPS training. Statistical evaluation was performed using Chi-square, Pearson correlation, and logistic regression using α <0.05.

RESULTS
Of the 206 NDPS residents, 202 (98%) completed the PGY1 year; 56 (27%) completed a PGY2 NDPS year. Medical schools of origin were US-MD (28%), US-DO (3%), US-IMG (26%), and Non-US IMG (44%). Pre-match goal was general surgery for 137 (67%). Eighty (39%) obtained categorical general surgery positions, 85 (41%) obtained categorical positions in other specialties, and 41 (20%) failed to obtain a categorical position immediately after their NDPS years. Ultimately 62% of NDPS residents achieved primary success and 80% achieved secondary success. Of 56 PGY-2 NDPS residents, 24 (43%) achieved primary success and 10 (18%) others achieved secondary success for a total of 34 (61%). For PGY-2 NDPS residents obtaining primary success, 83% scored above the 30th percentile on the ABSITE (p<0.03) and for secondary success, 76% scored greater than the 30th percentile (p<0.05). Mean USMLE Step 1 and Step 2 scores for those who obtained secondary success were 226 and 234 vs 215 and 219 for those who failed to secure a categorical position (p<0.01). Logistic regression using USMLE Step 1 and Step 2 scores as predictor variables revealed that the USMLE Step 2 score was a significant predictor of primary (p<0.03) and secondary success (p<0.02). For PGY-2 NDPS, ABSITE score was the only significant predictor of primary success (p<0.02).

CONCLUSIONS
NDPS training provides a viable and successful opportunity for at least 80% of young physicians to pursue their career goals even after having an unsuccessful first match. Program Directors may find utility in using USMLE Step 2 and ABSITE scores when counseling NDPS residents.
FOCUS AREA: PREVENTATIVE MEDICINE

HARRIS ROOM (HUC 2.212)
VIETNAM ERA VETERAN STATUS AND TRANSITION INTO COGNITIVE DYSFUNCTION IN MEN BEGINNING AT AGE 50

Pamela S. Willrodt, M.S.

Department of Demography, College of Public Policy, The University of Texas at San Antonio

BACKGROUND
The present study was conducted utilizing a life course perspective to assess the risk of cognitive decline (CD) among men who would have been of age to serve in the Vietnam War. Seven waves (1998 through 2010) of the longitudinal Health and Retirement Study (HRS) were used to analyze the differential risk of transitioning to CD among Veterans and NonVeterans (n=7,037).

METHODS
Version N of the RAND harmonized HRS data as well as various fields from the original HRS survey data were used in discrete-time hazard analyses to determine associations between a number of literature-validated variables and the risk of a decline into cognitive dysfunction (CD).

RESULTS
Of the Early Life variables, low paternal education (HR=1.522, p<0.10) and poor health in childhood (HR=2.405, p<0.10) were only marginally significant in increasing risk. However, being a NonHispanic Black significantly increased the risk of transitioning to CD (HR=4.328, p<0.001). Of the Emerging Adulthood variables, education less than or equal to high school increased risk (HR=4.203, p<0.001) while being a Veteran slightly decreased the risk (HR=0.510, p<0.05). Finally, the Middle Adulthood measures of light drinking (HR=0.565, p<0.10) and self-reporting good health (HR=0.447, p<0.01) both decreased the risk of a transition into CD.

CONCLUSIONS
The early life variables have little to no significance on the risk to CD during the early adulthood period. Having served in the U.S. armed forces is associated with lower risk of the transition to cognitive decline as is self-reporting good health.
THE PREVALENCE OF METABOLIC SYNDROME IN RECENT AIR FORCE RETIREES

Col Mark True, MD¹, Jana Wardian, PhD, MSW², Lt Col (ret) Tom Sauerwein, MD², and Col (ret) Marcus Cranston, MD, MPH³

¹Endocrinology Service, San Antonio Military Medical Center; ²Diabetes Center of Excellence, 59th MDW; ³Medical Education, Nellis AFB

BACKGROUND
Metabolic syndrome (MetS) is strongly associated with cardiovascular disease. With prevalence rates increasing in the US, prevention efforts have largely focused on diet and exercise interventions. Recent United States Air Force (USAF) retirees represent a population exposed to a prolonged health promotion campaign and access to preventive care for at least 20 years prior to retirement, but MetS rates in this population have not been previously studied.

MATERIALS & METHODS
From December 2011 to May 2013, USAF retirees within eight years of their date of retirement were recruited at five USAF bases. Consenting subjects underwent examination and laboratory studies to assess the five diagnostic criteria measures for MetS.

RESULTS
The study population (n = 381) was primarily male (81.9%), enlisted (71.1%) and had a mean age of 48.2 years. The prevalence of MetS in this population was 37.2%. The prevalence of each of the MetS diagnostic criteria was as follows: central obesity, 39.8%; elevated fasting glucose, 32.4%; high blood pressure, 56.8%; low HDL-cholesterol, 33.3%; and elevated triglycerides, 42.7%. MetS was found to be more common among males (OR = 4.05; CI = 1.94, 8.48) and enlisted (OR = 2.23; CI = 1.24, 4.01). MetS was also strongly associated with a history of participating in the Air Force Weight Management Program (OR = 2.82; CI = 1.41, 5.63) and increased weight since retirement (OR = 4.00; CI = 1.84, 8.70). However, the study did not find an association between the presence of MetS and time since retirement or self-reported diet and exercise changes since retirement.

CONCLUSIONS
Despite military health promotion efforts and fitness standards, the prevalence of MetS among recent USAF retirees was 37.2%, which approximates similar age-specific rates in the overall US population (40.8%). Further study is needed to determine the incidence of cardiovascular disease risk factors throughout the period of military service and into retirement. A better understanding of the determinants of MetS in this population might help efforts to lower cardiovascular risk in both military and civilian populations.
ENZYME TRIGGERED DRUG DELIVERY FOR GRAFT TARGETED IMMUNOSUPPRESSION AND NEUROREGENERATION AFTER VCA

Sharon Lawson, Lin Wang, Anton Fries, Renford Cindass, Kevin Wu, Vijay Gorantla and Michael Davis

AIMS
Vascularized Composite Allotransplantation (VCA), as exemplified by hand and face transplantation, can restore form, function and quality of life in unreconstructable combat or civilian trauma. To date two amputee service members have received hand transplants. However, the life enhancing utility of VCA is restricted by the lifelong risks of systemic immunosuppression. To justify such risks, and to support VCA options over conventional reconstruction or prostheses, we need to accomplish graft survival consistent with functional neuroregeneration. Our goal was to establish efficacy and feasibility of a tacrolimus eluting graft embedded system to prevent acute rejection (AR) and promote neuroregeneration after VCA.

METHODS
A tacrolimus eluting inflammation/AR responsive hydrogel platform was developed and evaluated in a robust pre-clinical orthotopic forelimb porcine VCA model (n=13). Tacrolimus levels in VCA tissues and systemic troughs were serially monitored along with clinicopathologic signs of AR. Nerve regeneration was longitudinally assessed by nerve conduction studies.

RESULTS
Control VCA (N=2) underwent Banff Grade 4 acute rejection (AR) by post operative day six. VCA grafts with embedded gels had not undergone acute rejection after four weeks (n=9). Two animals were excluded. End point of the study was 100 days post operatively; nerve regeneration studies showed positive results from day 57.

CONCLUSIONS
Graft embedded macrophage responsive hydrogels successfully achieved high tacrolimus levels in VCA tissues with negligible / undetectable systemic levels with successful prevention of AR, prolongation of VCA survival beyond 4 weeks and electrophysiologic evidence of nerve regeneration. Future studies will investigate repeated delivery of drug gels once monthly to further prolong graft survival for longer-term evaluation of immune and functional neuroregeneration outcomes.
HYPERBARIC NORMOTHERMIC PERFUSION MITIGATES REPERFUSION INJURY IN PORCINE VCA

Kevin Wu, MD, Cpt R Cindass, MD, SD Lawson, MD, LC Wang, MD, Vijay Gorantla, MD,Ph.D., LtCol Michael Davis, MD

RESTOR™ Program, 59th Medical Wing ST

AIMS
To evaluate the efficacy of a novel subnormothermic (SN) hyperbaric oxygen warm ex-vivo perfusion strategy using hyperoxygenated University of Wisconsin (UW) solution to mitigate reperfusion injury in a porcine VCA model.

METHODS
Gracilis myocutaneous flap autotransplants were performed heterotopically in the cervical area of Yorkshire swine. Group 1 (n=5) flaps were perfused with cold UW at 4°C for three hours prior to transplant. Group 2 (n=8) flaps were perfused with hyperoxygenated UW for seven hours at 37°C in a hyperbaric chamber at 3 atm before transplantation. Flaps were monitored daily for clinical evidence of rejection and biopsied per protocol with an end point of 14 days. Histologic analysis was blinded.

RESULTS
Autotransplants remained viable at the 14 day end point. Histological evaluation revealed extensive evidence of necrosis in all controls, but flaps placed on hyperbaric ex-vivo perfusion support showed decreased histologic evidence of ischemic injury or necrosis.

CONCLUSIONS
Hyperbaric subnormothermic perfusion extends the viability of porcine free flaps ex-vivo significantly beyond normal ischemic tolerance. Injuries secondary to ischemia and cold preservation are mitigated. This technology has the potential to extend the window of time between procurement and transplantation in the growing field of VCA as well as solid organ transplant. Such innovations would dramatically expand the donor pool and provide options for superior matches to transplant candidates.
GOOD MOURNING, YOUTUBE! GRIEVING AND BEREAVING ON THE WORLD’S MOST POPULAR VIDEO-SHARING WEBSITE

Shira Amdur, Aparna Seetharama, Jeanette Ross, Sandra Sanchez-Reilly, Shuko Lee

OBJECTIVES
1. To assess YouTube as a resource for valuable and relevant information related to grief and bereavement.
   Content: video examples, small group discussions, discussion of results
2. To explore various formats for information on grief and bereavement available on YouTube.
   Content: Discuss grief and bereavement available information and who is tapping into it

BACKGROUND
YouTube is an easily accessible and widely sought tool among general public (GP) to both receive and convey information. Little is known about what could be found as it pertains to grief/bereavement.

RESEARCH OBJECTIVE
To assess the quality of videos available on this platform pertaining to the keywords “grief” and “bereavement.”

METHODS
First 150 videos available for keywords “grief” and “bereavement” (300 videos total) were watched by two observers. Each video was assessed for 1) quality (useful, misleading, personal experience), 2) viewership, 3) producer (amateur vs. professional), 4) uploader (healthcare organizations, media/news, hospices, independent organizations- IO), 5) target audience (GP, healthcare professionals, both).

RESULTS
N=300. 88 videos described as “good quality” and 212 videos described as “misleading.” Videos were on YouTube for 1,006 days (mean); duration of time on YouTube did not influence video quality. 69% of the misleading videos were amateur vs. 18.2% useful videos, 81.8% useful videos were made by professional organizations (p<0.0001). Viewership of misleading videos was considerably greater (average of 348,115) as compared to useful videos (26,293). 72.7% useful videos were uploaded by IO, as opposed to hospices (3.4%), universities (3.4%), and healthcare institutions (13.6%). 99% misleading videos were uploaded by IO. Useful videos were uploaded by IO, professionally made, though viewership was considerably smaller for these videos than for the misleading and usually amateur-made videos.

CONCLUSION
This study provides information available on YouTube with the search terms “grief” and “bereavement.” Though there is a massive amount of misleading videos, there is also a significant information related to educational/self-help resources, spiritual guidance, and personal experiences. It was surprising to find how vast an amount of helpful information came from IO.

IMPLICATIONS FOR RESEARCH, POLICY OR PRACTICE
Given the potentially substantial audience that remains untapped, YouTube is an underutilized resource for the dissemination of information by hospices and healthcare organizations.
Diabetes Center of Excellence, 59th Medical Wing

The United States Air Force (USAF) Diabetes Center of Excellence (DCOE) provides innovative initiatives reaching global military treatment facilities, their primary care managers, and support staff. With only 9 endocrinologists in the entire USAF and >50,000 diabetes patients, using technology to deliver specialty consultation, staff education, and pertinent resource tools is more than necessary; it is essential.

The DCOE Outreach division initiated programs to assist primary care providers in the care and management of diabetes patients. Project ECHO (Extending Community Healthcare Outcomes) was implemented in January of 2012, focusing on primary care providers/managers (PCP/PCM). It facilitated virtual grand rounds or e-consultation. According to participant surveys, the self-reported likelihood of change in practice after attending ECHO averages 84%. Live monthly sessions enable the PCM to bring complex or difficult-to-manage patient cases to the expert endocrinologists.

In October of 2012, the first Diabetes Champion Course was launched with the goal of extending training to remote Military Treatment Facilities (MTFs), designating a provider as diabetes champion with team support of his/her implementation of diabetes clinical practice guidelines. On average, 74% report improvement in adherence to diabetes Clinical Practice Guidelines resulting from knowledge gained during the course. This three-day blended learning course has progressed to include an in-residence class, a two-way virtual teleconference platform, and an interactive computer-based platform, permitting extension to a broader audience.

Furthering the outreach to assist nurses (primarily Certified Diabetes Educators) in the management of and education to their diabetes patients, the DCOE developed a monthly online webinar in November of 2013. Participants reported, on average, these webinars were 88% effective in closing the knowledge gap on care and management of diabetes patients. This online activity is a 30-minute didactic on the most current diabetes topics, and elicits discussion regarding the best practice for their patients.

Through these three unique educational offerings, the use of technology has allowed the DCOE to streamline some basic, yet core collaboration within the military medical community. Additionally, the technological make-up of each activity permits the DCOE to extend its resources to more than just the USAF; it now reaches primary care clinics within the United States Army and Navy. As technology advances, the DCOE will develop new products to continue extending its educational reach.
VISUALIZING AND UNDERSTANDING THE SPREAD OF MOODS AND EMOTIONS AMONG GRADUATE NURSING STUDENTS

MAJ Patricia M. Schmidt¹, Thomas W. Moore², Gregory J. Lambert², Patrick D. Finley²

¹Daniel K. Inouye Graduate School of Nursing, Uniformed Services University of the Health Sciences; ²Sandia National Laboratories

Keywords: Social Networks, Shared Affect, Nurses’ Moods and Emotions

Relationships in a nursing environment are complex and highly integrated. The affect, moods and emotions, of an environment influences performance, decision making, safety, turnover and absence, prosocial behavior, and negotiation and conflict resolution which have an impact on patient outcomes. Understanding how relationships impact affect, behaviors, and cognition can lead to a healthier work environment therefore improving patient outcomes. Limited information exists regarding the spread of affect among healthcare providers. The purpose of the study was to observe and describe the spread of affect in a group of military graduate nursing students using social network analysis.

There were 35 participants from a closed network of 60 advanced practice nursing students. Social network surveys established relationships among the participants. Student’s affect was surveyed twice daily 14 times over the course of a semester to measure changes in affect. Affect expressivity and susceptibility to the affect of others was measured. This study utilized social network analysis and linear statistics to identify and visualize relationships among graduate nursing students during an academic semester. The relationships were correlated with the affect of participants to determine the impact of individual moods and emotions on those with whom they interact.

Affect among participants was correlated with their identified “friends” at four time points and affect similarity was correlated with academic specialty program and the amount of time spent with classmates. Environmental events occurring during the semester were identified and associated with changes in affect among the participants.

The moods and emotions of nurses are impacted by the events of the day and those whom they spend much of their time. Developing work environments that support and facilitate high positive affect and low negative affect of nursing staff should improve the quality of patient care.

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The view(s) expressed herein are those of the author(s) and do not reflect the official policy or position of Brooke Army Medical Center, the U.S. Army Medical Department, the U.S. Army Office of the Surgeon General, the Department of the Army, Department of Defense or the U.S. Government.
BEHAVIORAL SKILLS TRAINING AND GENERALIZATION OF PARENT IMPLEMENTED EVIDENCE-BASED INTERVENTIONS

Felicia Castro-Villarreal, PhD, LSSP and Leslie Neely, Ph.D., BCBA-D

The University of Texas at San Antonio

Children with autism often require intensive intervention, but a shortage of qualified behavior specialists and the time investment required to implement such interventions prevents some children from receiving the interventions they need. As such, there is a critical need for an intervention model that maximizes resources and expands access through coaching and embedded skill generalization to the natural setting. The purpose of this study is to evaluate a clinic based training program on parent implementation and generalization of applied behavior analytic (ABA) interventions in their home. In collaborative partnership with the UTSA TEAM center and TEAM center parents, Three parents of children with autism were taught to implement an ABA intervention using behavioral skills training (BST) plus video-based self-evaluation and performance feedback. A multiple-probe across participants design was used to evaluate the effects of the parent training on the parents’ implementation fidelity, as measured by the percentage of accurately completed items within a procedural fidelity checklist. Intervention distal effects on child successful completion of target adaptive skills and independence were evaluated. Results demonstrated that all parents met the pre-determined performance criterion of 90% implementation fidelity within five sessions. Parent fidelity of implementation maintained at levels above baseline during follow-up phase. Preliminary child data indicate increased independence of the target adaptive skill. These results suggest that parent training using BST plus video-based self-evaluation and performance feedback may be an effective method of promoting adaptive skill development in natural settings for children with autism spectrum disorder.
AFTERNOON BREAKOUT PRESENTATION ABSTRACTS

FOCUS AREA: PUBLIC HEALTH AND WELLNESS

BALLROOM (HUC 1.104 & 1.106)
A QUANTITATIVE EVALUATION OF THE BEXAR COUNTY DIABETES SELF-MANAGEMENT PROGRAM

Amanda N. Manzello, B.S., Kinesiology, Health, and Nutrition, College of Education and Human Development, The University of Texas at San Antonio

Shamshad Khan, PhD, Department of Communication, College of Liberal and Fine Arts, University of Texas at San Antonio

Diabetes is a rising health concern in Bexar County; 1 in 7 residents are currently living with diabetes. In October 2013, the City of San Antonio Metropolitan Health District began implementation of The Diabetes Self-Management Program (DSMP), in efforts to provide education and self-management tools for Bexar County adult residents to better manage their day-to-day lifestyles. The program was developed by Stanford University and consists of six healthy living workshops to help support individuals and their families who live with diabetes. Each workshop is held once a week for 2.5 hours, with a minimum of ten participants per workshop, and covers topics (i.e., managing symptoms, exercise for strength and energy, healthy eating, medication use, relaxation techniques, working with your physician, setting goals, problem solving, dealing with negative emotions, and more). Although the DSMP is a national program it has not been evaluated in Bexar County. Therefore a quantitative evaluation could inform stakeholders and practitioners about the program’s effectiveness in raising the participants’ basic knowledge and understanding of diabetes and healthy living.

A quantitative design will be utilized to assess the DSMP participant’s basic knowledge of diabetes and healthy living, including their overall satisfaction with the program. Data will be collected through a pre and post-test paper questionnaire across five parallel workshops throughout Bexar County. A pretest will be given at the beginning of workshop one, and a post-test at the end of workshop six. SPSS quantitative tools will be used to analyze the participants’ overall increase in knowledge scores from pre to posttest. The measurements will provide insights about the Diabetes Self-Management program effectiveness in Bexar County, including the participants’ overall satisfaction with the program. Findings will be made available by the conference date.
THE EFFECT OF INTERROLE CONFLICT ON HEALTH OUTCOMES

David P. Oviatt, Ph.D., Michael R. Baumann, Ph.D., and Raymond T. Garza, Ph.D.

Department of Psychology, College of Liberal and Fine Arts, The University of Texas at San Antonio

BACKGROUND
Interrole conflict occurs when the demands of one area of an individual’s life interfere with the responsibilities of another area. Such conflicts are related to a number of health related problems, including various forms of substance use, psychological strain, and physical complaints. Although a large body of research exists on the health effects of managing the conflicting demands of work and family (work-family conflict or WFC), far less exists on the interrole conflict between work and school (work-school conflict or WSC). Given that over two-thirds of college students have outside employment while enrolled in classes, understanding the effects of WSC is an important part of understanding college students’ experiences in particular, as well as informing future studies of interrole conflict in general.

METHODS
The current effort analyzed data from 2,055 participants drawn from a web-based survey of four geographically and ethnically diverse educational institutions in the U.S. The questionnaire took 30-50 minutes to complete, and participants were compensated for their time. The questionnaire assessed alcohol use, marijuana use, cigarette use, depressive symptomatology, physical health, and current employment characteristics as well as behaviors and attitudes not related to the current research question.

RESULTS & CONCLUSIONS
A series of linear, negative binomial, and logistic regressions indicated that participants who reported higher levels of WSC consumed more alcohol, smoked marijuana more often, and were more likely to have smoked cigarettes in the last 30 days. Those with higher WSC also reported higher levels of depressive symptomatology and decreased physiological health. Consistent with tension-reduction theory, the relationships between WSC and substance use were mediated by depressive symptomatology. In short, the subjective experience of conflict increased a number of maladaptive health behaviors and feelings, and decreased participant’s overall reports of health.

These results are likely relevant to military personnel. Indeed, service members may experience WFC at some stages of their careers and WSC at others. Regarding the former, stateside duty has the potential to result in WFC similar to that observed in civilian postings, and would likely lead to many of the same effects. Further, for personnel with stateside families, deployment OCONUS may create a particularly extreme form of WFC. Regarding the latter, many personnel pursue an education while serving and thus may experience WSC. Future research is needed to determine the extent to which the findings obtained generalize to a military population.
There are many challenges in the management of patients with type 2 diabetes in the outpatient care setting, especially within a military clinic. Challenges for the provider include frequent changes and/or reduction of resources and staffing and lack of continuity of care. In the American Diabetes Association (ADA) Standards of Care Improving Care objectives include optimizing provider and team behavior to support patient behavior change.

This quality improvement study combines qualitative and quantitative methodology in reflectively exploring positive case studies to ascertain strategies that enabled patients to engage in self-management. Moreover, this study seeks to better understand how applying the ADA Standards of Care in a military primary care clinic would impact clinical outcomes in patients. Case studies were selected based upon poor clinical markers at baseline and those that required application of innovative and creative strategies to improve self-management. The cases are representative of some common themes within the patient with type 2 diabetes in a military primary care clinic.

In addition, part of the goal was to examine how patients responded to education and self-efficacy through a team-based approach, therefore data was extracted to measure which strategies (e.g. diabetes education, changes of medications, promotion of weight loss) affected clinical outcomes (e.g. A1C, body mass index, blood pressure). This approach was observed to require increased time initially for the development of a patient-centered relationship.

Case studies chronicle patients with type 2 diabetes and associated co-morbidities demonstrating the utilization of motivational interviewing, development of patient-centered relationship, and individualization of therapies based on clinical and personal characteristics. Patients improved in A1C and other clinical markers. Interventions include changes in medication, use of non-pharmacologic therapies; proactive follow-up; education and self-management support.

These case studies take the theoretical concepts of shared decision-making, patient-centered care, and the team-based approach into applied clinical practice in the military primary care clinic. Limitations include a small patient population and findings are not necessarily generalizable to a non-military setting. Future studies need to examine individual strategies and their long term effect.

The researcher is convinced about the value of building the patient-physician relationship as foundational to good healthcare. Furthermore, it is essential to create a team-based approach to support patient lifestyle changes that are related to better health outcomes. Therefore, reflective practice needs to become an integral part of clinical care. While the physician engages with her patients, she has learned a great deal about exemplary practice from her patients. The future of care is moving from a reactive model of care to proactive care with more focused DM2 appointments, follow-up and self-management support were demonstrated by some of these patients.

**LEARNING OBJECTIVES**
1. Participants will understand application of ADA Standards of Care.
2. Participants will learn how to individualize treatment plans for patients with type 2 diabetes.
3. Participants will learn strategies for supporting their patients with type 2 diabetes.

The views expressed are those of the presenter(s) and do not reflect the official views or policy of the Department of Defense or its Components.

**KEYWORDS**
Type 2 Diabetes, Patient-centered care, Team-based approach
Since the early 2000s, the world drew its attention to Female Gentile Mutilation/Cutting (FGM/C), which is mostly prevalent in Africa and especially in Egypt -- a country that holds the title of being the world’s FGM capital. According to a 2014 statistical report by Population Reference Bureau (PRB), 91 percent of Egyptian women between the ages of 15 to 49 have undergone FGM/C. In 2007, the Egyptian Ministry of Health issued a ministerial decree closing on the loophole in a previous 1996 decree, banning everyone, including health professionals, from performing FGM/C in governmental or non-governmental hospitals/clinics. In the same year, Grand Mufti Ali Gomaa’s issued a 'Fatwa' condemning FGM/C, and the Azhar Supreme Council for Islamic Research issued a statement explaining that FGM had no basis in the core Islamic Sharia or any of its partial provisions. The report by PRB indicated a decline in the practice of 6 percent, comparing the figures to that of 1995 where 97 percent of the women of the same age group reported that they had undergone FGM/C. A decade later, Egypt, in comparison to neighboring African countries, failed to execute effective measures to further reduce the number below the 90 percent beltline.

Given the current political turmoil and instability in Egypt, the ongoing political strife steered attention away from public health to politics and security. As a result, it is assumed that the Egyptian government’s lack of action is contributing directly and significantly to the current prevalence of FGM/C compared to its neighbors. A critical policy and media discourse analysis will be used to understand how FGM/C has been understood and represented in mainstream media and at the policy level, a tool used by the government to send public messages since 2007. The main goal of this paper is to analyze and demonstrate how a serious public health issue such as FGM, which is gender related, is being marginalized and what lessons we can learn from it. In addition, a controversy arises from this topic given the challenge it faces where the tradition seems to be rooted firmly in the beliefs of the uneducated and less fortunate majority despite the harms these same women witnessed.
FOCUS AREA: PRE-HOSPITAL CARE AND EN ROUTE CARE

HARRIS ROOM (HUC 2.212)
APPLICATION OF THE NATIONAL PARK SERVICE EMERGENCY MEDICAL SERVICES PROGRAM AUDIT WORKSHEET TO A DEPARTMENT OF DEFENSE EMERGENCY MEDICAL SERVICES SYSTEM: A PILOT ASSESSMENT OF US MILITARY EMERGENCY MEDICAL SERVICES ON THE ISLAND OF OKINAWA, JAPAN

EM Ross, LCDR, MC, USN, US Naval Hospital Okinawa, Japan
G DeMers, CDR, MC, USN, Naval Medical Center San Diego, CA
CU Kharod, Col, MC, USAF, SAUSHEC, JBSA, TX
CW Cunningham, LTC, MC, USA, SAUSHEC, JBSA, TX
BD Walrath, CDR, MC, USN, NMTSC/SAUSHEC, JBSA, TX

BACKGROUND
A 2007 consensus statement from Emergency Medical Services (EMS) medical directors titled Evidence-Based Performance Measures for Emergency Medical Services Systems: A Model for Expanded EMS Benchmarking identified “crude measures of stakeholder satisfaction and other anecdotal measures” as the primary evaluation source of EMS system performance. A lack of standardized evidence-based metrics limits local EMS system analysis. Several agencies have created objective criteria to evaluate EMS systems, to include the Commission on the Accreditation of Ambulance Services and National Park Service (NPS). Current Department of Defense (DoD) instructions and manuals on Fire and Emergency Services direct usage of applicable national and state certification process but include very little detail on EMS. Service specific regulations and instructions are more detailed in EMS requirements but do not include standardized checklist type criteria in evaluating programs. The DoD established Prehospital EMS Working Group (PHEMSWG) has also not promulgated standardized evaluation criteria. The island of Okinawa is a critical base of operations in the execution of the joint forces Pacific Strategy, hosting over 55,000 active duty service members of all 4 services and their dependents on 877 square miles. US Naval Hospital Okinawa (USNHO) and Marine Corps Installations Pacific (MCIPAC) work in collaboration with the USAF 18th Medical Group at Kadena Airbase to provide EMS on the island.

METHODS
A comprehensive review of the Okinawa-based US Military EMS system from 2011-2014 was conducted utilizing the NPS EMS program audit worksheet. The worksheet consists of 20 categories rated between 0-5 based on document condition and system implementation. A score of 0-35 indicates the system is well planned and compliant with NPS policy, 36-60 indicates need of improvements to be in compliance with NPS policy, and 61-100 reveals need of major improvement to be in compliance.

RESULTS
From 2011-2014, the Okinawa-based US Military EMS system scored 31 on the NPS EMS Program Audit Worksheet. Categories either not present (5) or incomplete (4) included #5 (Partnerships in Place and Current) and #13 (Appropriate Risk Management Procedures Are Being Implemented) This score indicates the US Military EMS program in Okinawa is well planned and compliant with NPS policy.

CONCLUSION
The Okinawa-based US Military EMS system is well-planned based on the NPS EMS Program Audit Worksheet. Objective criteria that have been validated for DoD EMS systems would provide a tool for future evaluation of other DoD local EMS systems. Further investigation, development, and implementation of such a tool by the DoD is recommended.
EFFICACY OF INTRAVENOUS COBINAMIDE VERSUS HYDROXOCOBALAMIN OR SALINE FOR TREATMENT OF SEVERE HYDROGEN SULFIDE TOXICITY IN A SWINE (SUS SCORFA) MODEL

Joseph Maddry, Norma Garrett, Vikhyat Bebarta, Susan Boudreau, Maria Castaneda and Gerry Boss

BACKGROUND
Hydrogen sulfide (H2S) is a potentially deadly gas that naturally occurs in petroleum and natural gas. The Occupational Health and Safety Administration cites H2S as a leading cause of workplace gas inhalation deaths. H2S is also an attractive terrorism tool because of its high toxicity and ease with which it can be produced. Although unlikely to cause casualties when released in open spaces, in closed spaces, such as aircraft, fatalities could occur. Several potential antidotes are available for hydrogen sulfide poisoning but none have been completely successful.

OBJECTIVE
To compare the time to spontaneous ventilation among groups of swine with acute H2S induced apnea treated with intravenous (IV) cobinamide, IV hydroxocobalamin or saline.

METHODS
Twenty-four swine (45-55 kg) were anesthetized, intubated, and instrumented with continuous femoral and pulmonary artery pressure monitoring. After stabilization, anesthesia was adjusted such that animals would spontaneous ventilate with an FIO2 of 0.21. Sodium hydrosulfide (NaHS; concentration of 8 mg/ml) was begun at 1 mg/kg/min until apnea was confirmed for 20 seconds by capnography. This rate was sustained for 1.5 minutes post apnea, then decreased to 0.7 mg/kg/min for 3 minutes, then decreased to 0.1 mg/kg per minute for the remainder of the study. One minute post apnea animals were randomly assigned to receive cobinamide (4.2 mg/kg), hydroxocobalamin (4 mg/kg) or saline and monitored for 60 minutes. G* power analysis using the Z test determined that equal group sizes of 8 animals were needed to achieve a power of 80% in detecting a 50% difference in return to spontaneous ventilations at α=0.05.

RESULTS
There were no significant differences in baseline variables. Moreover, there were no significant differences in the mg/kg dose of NaHS (5.6 mg/kg; p=0.45) to produce apnea. Whereas all of the cobinamide treated animals survived, none of the control or hydroxocobalamin treated animals survived. Mean time to spontaneous ventilation in the cobinamide treated animals was 3.2 minutes.

CONCLUSIONS
Cobinamide successfully rescued the severely NaHS-poisoned swine from apnea in the absence of assisted ventilation.
A COMPARISON OF BAG-VALVE-MASK (BVM) VENTILATION USING A STANDARD VS A MODIFIED BVM IN A MANIKIN MODEL FOR THE SINGLE RESCUER

Baruch Zobrist, EMPA-C, DSc
Monica L. Casmaer, EMPA-C, DSc

INTRODUCTION
Bag-mask ventilation is the most critical step in managing airway emergencies. Ventilation is dependent on appropriate mask seal. Previous studies have shown that a two-person, two-handed technique is superior to a single-person single-handed technique; however, this is not always possible in the pre-hospital and combat environments.

OBJECTIVES
The purpose of this study was to compare performance of two Bag-Valve-Mask (BVM) ventilation devices (standard and modified devices) by emergency medical personnel through measurement of delivered tidal volume in a manikin model. Participants were stratified based on experience as well as hand size and grip strength. The secondary objective was to compare device preference.

METHODS
This was a prospective, randomized, crossover study. Data was collected from July through October 2015 at SAMMC. Participants were randomized to device order. Demographic information was collected including job status, gender, experience, and previous BVM ventilation. Hand grip strength and size (length, width, span) were measured. Participants then provided BVM ventilation using the assigned devices at a rate of 10 breaths per minute for 3 minutes for a total of 30 breaths. Tidal volume of each delivered breath was recorded in milliliters. After a 3 minute rest period, testing was repeated with the second device. Anonymous questionnaires using a Likert scale to assess qualities of the modified device and overall device preference were obtained.

RESULTS
70 participants completed the study. There was a statistically significant higher tidal volume per breath delivered with the modified BVM compared to the standard BVM (p < 0.001), and no statistically significant interaction between tidal volume and order of device use (p > 0.05). There was a direct correlation between grip strength and tidal volume delivered with each device. 80% of participants preferred the modified BVM.

CONCLUSIONS
The modified BVM delivers a higher average tidal volume per breath than the standard BVM and was preferred by participants. This difference in tidal volume delivered is most clinically significant in austere environments in which one rescuer may be available to provide ventilations to a casualty. Further research is needed to evaluate the modified device in a human population and under difficult circumstances.
REDUCED FATTY ACID BINDING CAPACITY OF HUMAN ALBUMIN USED IN VOLUME RESUSCITATION MAY POTENTIALLY INCREASE HEMOLYSIS IN HYPOVOLEMIC SHOCK

Alexander Penn, PhD¹, Michael Dubick, PhD¹, Ivo Torres Filho, PhD¹

¹Damage Control Resuscitation, US Army Institute of Surgical Research, San Antonio, TX

The choice of resuscitation fluid for hypovolemic trauma patients in the absence of fresh whole blood remains controversial. Albumin solutions have shown promise in animal studies but meta-analysis suggests they have had little to no benefit in human trials. This contradiction is currently unresolved. Unbound (cytotoxic) free fatty acids (FFAs) are generated in the intestine during ischemia and enter the mesenteric lymph, from where they likely enter the circulation, resulting in organ damage, hemolysis, coagulopathy and further ischemia. We hypothesize that resuscitation fluids with higher available binding capacities for FFAs may help prevent these events in shock. The objectives of this in-vitro study were to determine: 1) if commercial sources of pharmaceutical-grade human albumin contain FFAs, 2) if these FFAs result in a decreased available fatty acid binding capacity, and 3) if binding capacity will affect the level of hemolysis that occurs in whole blood when exogenous FFA is introduced in levels similar to those in shock. To achieve these objectives, we first measured FFA concentrations in human albumin via a kit. We then developed a new assay for measuring fatty acid binding capacity using exogenous oleic acid (OA), glass fiber filtration, and the FFA kit to measure binding capacity in both the human albumin and FFA-free bovine albumin. Lastly, we mixed fresh human whole blood 4:1 with PBS, human albumin, FFA-free bovine serum albumin (BSA), or BSA that was first saturated to its binding capacity with OA and measured the amount of hemoglobin released into the plasma after 30 minute incubation with 0 to 5 mM OA. We found that pharmaceutical-grade 5% human albumin contained 4.6±0.3 mM FFA (N=5 lots), ~7x the physiologic concentration, leaving an available binding capacity of 4.8±0.6 mM out of a total binding capacity of 9.4±0.8 mM. This represented a significant loss of binding capacity (p<0.0001) compared to the total. FFA-free BSA (N=5 replicates) had significantly greater available binding capacity of 7.0±1.4 mM (p=0.02) compared to the pharmaceutical-grade human albumin. In 4:1 mixtures of blood to PBS or albumin, hemolysis was reduced after addition of all concentrations of exogenous OA with 25% FFA-free compared to 25% pre-saturated BSA (p<0.04). Likewise, 0.5 and 5 mM exogenous OA caused less hemolysis when blood was pre-mixed with 5% FFA-free BSA than with 5% human albumin (p<0.01). These preliminary findings suggest that the failure of albumin in human trials to live up to the promise of animal studies may be due to steps in the manufacturing process that reduce the FFA binding capacity of human albumin. Supported by US Army Medical Research & Materiel Command.
FOCUS AREA: IMMUNOLOGY AND INFECTIOUS DISEASES

BEXAR ROOM (HUC 1.102)
ACINETOBACTER BAUMANNII GUT COLONIZATION IS MEDIATED BY SECRETED THIOREDOXIN-A AND SECRETORY IGA

Patrick Ketter, PhD², Jieh-Juen Yu, PhD¹, M. Neal Guentzel, PhD¹, J. Seshu, PhD¹, Karl Klose, PhD¹, LTC Andrew Cap, MD, PhD², Bernard Arulanandam, PhD¹

¹University of Texas at San Antonio, San Antonio, TX 78249; ²US Army Institute for Surgical Research, JBSA Fort Sam Houston, TX 78234

BACKGROUND
Multi-drug resistant Acinetobacter baumannii (MDR-Ab) is an emerging threat in hospital settings worldwide. Primarily encountered as a hospital acquired infection (HAI), multi-drug resistance can lead to inadequate antibiotic therapy and development of systemic infection. Although MDR-Ab gastrointestinal (GI) tract colonization is common, no studies have assessed mechanism(s) contributing to this phenomenon. Similarly the role of SIgA in control of MDR-Ab infections is poorly understood. Thus, in this study we set out to assess the contribution of SIgA to MDR-Ab GI tract colonization and elucidate potential mechanisms involved in this process.

METHODS
Wild-type (WT) or SIgA deficient mice were challenged orally with MDR-Ab to assess survival and colonization. Sections of small intestine were collected from infant mice for ex vivo attachment assays. MDR-Ab cultures incubated with SIgA in vitro and supernatants were assessed by non-reducing SDS-PAGE and Western blot. The resulting bacterial pellets were subject to mRNA extraction and RNAseq analysis to assess bacterial gene modulation resulting from SIgA exposure. Secreted protease activity was assessed using LB agar supplemented with 2% skim milk. Secreted reductase activity was assessed in M9 minimal medium supplemented with 1mM dithionitrobenzoic acid (DTNB). Inhibition of protease and disulfide reductase activity involved either protease inhibitor or 5μM DTNB, respectively. MDR-Ab mutants were subsequently generated by homologous recombination. Mutant strain virulence and colonization was assessed by intraperitoneal and oral challenge, respectively.

RESULTS
SIgA deficient mice exhibited significantly (p < 0.05) increase survival and bacterial clearance following MDR-Ab oral challenge relative to WT controls. MDR-Ab intestinal attachment was significantly (p < 0.0005) decreased in the absence of SIgA. While breakdown of SIgA by MDR-Ab was observed via Western blot, the banding pattern suggested a reductive mechanism. Furthermore, no secreted protease activity was observed while use of a disulfide reductase appeared to inhibit breakdown of SIgA. Gene ontology analysis of the MDR-Ab genome revealed a total of nine annotated genes exhibiting features consistent with disulfide reducing enzymes. Of these, only thioredoxin-A (trxA) exhibited significant (p < 0.05) up-regulation in gene expression by RNAseq. Deletion of trxA ablated secreted reductase activity, increased the associated LD50 by 100-fold, and impaired GI tract colonization.

CONCLUSION
MDR-Ab GI tract colonization requires SIgA and is mediated by secreted TrxA. Furthermore, inhibition or elimination of trxA expression reduces GI tract colonization indicating it may be a novel target for vaccine and chemotherapies.

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CHARACTERIZATION OF A LIVE ATTENUATED VACCINE FOR PROTECTION AGAINST MULTI-DRUG RESISTANT ACINETOBACTER BAUMANNII

Sarah Ainsworth¹, Patrick Ketter², Jieh-Juen Yu¹, M. Neal Guentzel¹, Bernard Arulanandam¹

¹University of Texas at San Antonio, San Antonio, TX 78249; ²US Army Institute for Surgical Research, JBSA Fort Sam Houston, TX 78234

BACKGROUND

Multi-drug resistant Acinetobacter baumannii (MDR-Ab) is an opportunistic pathogen associated with nosocomial and combat related infections sustained by military personnel. This emerging infectious disease is difficult to control due to enhanced multi-drug resistance limiting treatment options. Deletion of the thioredoxin gene (trxA) from a clinical isolate of MDR-Ab resulted in a 100-fold increase in LD50 relative to the wild type strain. Thus, the objective of this study was to test the efficacy of this attenuated strain as an attenuated live vaccine against MDR-Ab.

METHODS

Mice were vaccinated by either intraperitoneal (i.p.) or subcutaneous (s.c.) injection of 2 x 10⁵ CFU of the trxA mutant. In some experiments mice were also vaccinated i.p. with an equivalent dose of the WT strain Ci79. In all experiments, mice were given a booster of equivalent inoculum 14 days later. Mice were challenged at 30 days post-vaccination by i.p. injection with a lethal dose of the WT Ci79 strain (10 x LD50). Serum was collected on days 14 and 28 post-vaccination to monitor antibody titers. Spleens were collected from vaccinated mice 28 days post-vaccination and isolated splenocytes were stimulated with UV killed Ci79 to assess T-cell responses. Livers, spleens, and kidneys were extracted from vaccinated mice 24 hours post-challenge and observed for pathology.

RESULTS

Mice vaccinated with the trxA mutant were 100% protected against a lethal challenge of Ci79 regardless of vaccination route. Surprisingly, little if any immunoglobulin class switching was observed with IgM predominating. Spleens harvested from vaccinated mice exhibited negligible levels of IFNγ and IL-4 production when stimulated with UV killed WT Ci79. Importantly, tissues obtained from vaccinated mice displayed reduced pathology compared to tissues from non-vaccinated mice.

CONCLUSIONS

The attenuated trxA mutant provides protection against a lethal dose of the WT strain Ci79, most likely through a T-cell independent mechanism. Additional studies are currently underway to evaluate cross strain protection and to further elucidate the exact mechanism of protection.
CHAGAS DISEASE IN TEXAS: TARGETED OUTREACH AND EDUCATION FOR AWARENESS WITH HEALTHCARE PROVIDERS

Paula E. Stigler Granados, PhD, MSPH¹, Gerardo J. Pacheco, MPH¹, Trevor M. Maness, MVPH¹, Jose A. Betancourt, DrPH¹, Thomas L. Cropper, DVM, MPVM, DACVPM²

¹University of Texas Health Science at Houston, School of Public Health – San Antonio Regional Campus,
²Lackland Air Force Trainee Health Surveillance, JBSA Lackland, TX

BACKGROUND
Chagas disease is a vector borne parasitic disease affecting more than 8 million people globally. Although the disease is mostly prevalent in Latin America, it also exists in the southern portion of the United States, including Texas. Chagas is caused by a vector-borne parasite T.cruzi carried by a type of insect known as a triatomine or kissing bug. Most human infections come from contact with the feces of the infected triatomine bugs (also known as “kissing bugs”), which can enter the body through contamination of breaks in the skin or the eye, usually after the bug has bitten the person. However, infection can be transmitted congenitally and through blood transfusion, organ transplants, and the ingestion of infected food. Infection with T. cruzi typically results in three distinct phases characterized as: 1) acute phase lasting 4 to 12 weeks during which there is often a localized inflammatory lesion (chagoma) that is sometimes accompanied by a flu-like illness, fever, lymphadenopathy, and variable degrees of acute myocarditis, 2) an indeterminate phase which is a long asymptomatic stage lasting 10-30 years, and 3) the chronic phase which is characterized by progressive degenerative changes in hollow visceral organs, namely the heart, esophagus and colon. It is estimated that only 1 to 2% of the acute T. cruzi infections in adults are recognized and accurately diagnosed. Approximately 20-30% of infected persons will enter into the chronic phase of Chagas disease. Currently, there are two drugs available through the Centers for Disease Control (CDC) for treatment of Chagas disease, benznidazole and nifurtimox. As of 2013, neither drug has U.S. Food and Drug Administration (FDA) approval, and are currently only available through the CDC as part of a clinical trial.

METHODS
Research and disease reports show infected triatomines and Chagas disease are both present in Texas however the prevalence of the disease is still not understood. As an emerging neglected disease, diagnosis and access to treatment are limited in the United States due to the lack of knowledge about the disease and its vectors. In response to this need, we have organized the Texas Chagas Task Force with collaborations from experts in the fields of medicine, public health, entomology, veterinary medicine, military health and others to develop specific educational materials and implement targeted outreach and education on the topic of Chagas disease. The overall goal of the collaborative effort is to increase awareness of the presence of Chagas disease in South Texas, and improve knowledge regarding appropriate diagnosis, treatment, and prevention of Chagas.

RESULTS
After preliminary meetings the Taskforce has determined there is a large gap in our understanding and knowledge about the disease here in the United States. We are currently evaluating the effectiveness of current practices to screen, treat, prevent and care for individuals with Chagas.

CONCLUSION
This is a 5-year effort that overall will help to provide a more precise set of targeted information and materials to be disseminated to all first responders addressing the issue of Chagas disease.

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HOST MICRONNAS REGULATE HOST IMMUNITY AND DISEASE PATHOGENESIS IN CHLAMYDIA TRACHOMATIS INFECTION

Rishein Gupta PhD®, Tanvi Arkatkar MS®, Jonathon Keck BS®, Kevin Castillo®, Jieh-Juen Yu PhD®, M. Neal Guentzel PhD®, James P. Chambers PhD®, Bernard P. Arulanandam PhD, MBA®

South Texas Center for Emerging Infectious Diseases and Center for Excellence in Infection Genomics, University of Texas at San Antonio, One UTSA Circle, San Antonio, Texas 78249

BACKGROUND AND SIGNIFICANCE
Chlamydia trachomatis (Ct) is the leading cause of bacterial sexually transmitted diseases worldwide and results in serious sequelae such as pelvic inflammatory disease and infertility when left untreated because of its asymptomatic characteristics. In infected individuals, molecular events regulating immunity and development of upper genital pathology is not well investigated. Small RNA species such as microRNAs (miRs) are known to regulate immunity and immunopathology. Thus in this study, we determined signatures of host miRs and the mechanistic contribution of selected miRs in early stage immune responses and subsequent development of pathology.

METHODS
C57BL/6 wild type (WT) were intravaginally infected with Cm and cellular infiltrates (flow cytometry), miRs and putative targets (real-time PCR and mass spectrometry) and genital pathology was analyzed. Ex vivo genital cell cultures manipulated with miR agonists and antagonists were used for gain and loss of function validation.

RESULTS
Cm infection in C57BL/6 genital tract significantly regulated selected miRs at early i.e., day 6 post challenge. Amongst these, miRs-125b, -182, -214 and 30c were significantly altered and in vitro knockdown analyses with specific inhibitors resulted in increase in Cm infectivity corroborating our in vivo findings. Additionally, in vivo miR-214 was observed to regulate intracellular adhesion molecule (ICAM)-1 and neutrophil infiltration affecting development of upper genital pathology.

CONCLUSION
These findings provides evidence for early stage regulation of immune responses via host miRs affecting development of genital pathology. Given the timings of these early events correlate with vaccine induced protection, ongoing efforts in our laboratory include the role of these miRs signatures in antigen specific vaccination regimen against Cm infection.

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TREATMENT SEEKING BELIEFS AND BEHAVIORS IN AIR FORCE NURSING PERSONNEL

LtCol Stephen H. A. Hernandez, PhD, RN¹, Col Brenda J. Morgan, PhD, RN² and Mark B. Parshall, PhD, RN³

¹Assistant Professor, University of New Mexico, College of Nursing, Albuquerque, NM, 302d ASTS, Peterson AFB, CO, USAFR; ²Director, 59th Medical Wing Nursing Research Division, Joint Base San Antonio, TX, USAF; ³Professor, University of New Mexico, College of Nursing, Albuquerque, NM

BACKGROUND
Past research has focused on military service members’ perceptions of stigma with accessing mental health (MH) services, treatment seeking, and MH access preferences, but few studies have assessed these beliefs and practices with military health care personnel and even less research has focused on nursing personnel. Because of their role in promoting the health of service members, these perceptions, intentions, and preferences were explored in Air Force (AF) nursing personnel.

METHODS
An anonymous, online survey was administered to AF nursing personnel (n = 250) at three locations via the encrypted Research Electronic Data Capture web portal hosted by the University of New Mexico. Survey items assessed demographics, military grade, and prior deployments for military operations; the Stigma and Barriers to Care scales, the Connor-Davidson Resilience Scale, the Perceived Stress Questionnaire, and items to assess views of psychological problems; and questions regarding attitudes toward treatment seeking, subjective norms, prior access to MH services, and MH treatment preferences.

RESULTS
Over 40% of the sample accessed MH services in their lifetime. The majority who accessed MH services did so during their service, but this care was unrelated to a deployment. Approximately 44% reported experiencing a current stress or emotional problem, and 28% accessed MH services within the past six months. Levels of stress were significantly higher in individuals who accessed MH care in the previous six months (t(232) = 4.87, p < .001, d = .90) compared to those who has not, and there were no differences in stigma, barriers to care, or resilience based upon accessing MH care. Military resources were preferred to address a MH concern and respondents preferred to seek care from a MH professional rather than other providers.

CONCLUSIONS
Because levels of stress were higher in individuals who recently accessed MH care, the use of a shortened stress tool, such as the Perceived Stress Questionnaire, should be piloted to screen for increased levels of stress and aid in the referral of at-risk individuals to MH services. If the finding that the majority of service members who accessed MH services do so during their service, but the care was unrelated to a deployment remains consistent in future studies, policy makers will need to consider allocating additional MH resources to improve services for non-deployment related MH concerns being experienced by military personnel.

DISCLAIMER
The views expressed are those of the researchers and do not necessarily reflect the official policy or position of the Department of the Air Force, Department of Defense, U.S. Government or the TriService Nursing Research Program. The voluntary, fully informed consent of subjects used in this research was obtained as required by 32 CFR 219 and DoDI 3216.02_AFI 40-402, Protection of Human Subjects in Biomedical and Behavioral Research.

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NURSE CHAMPIONS – LEADING THE WAY IN REFORMING HEALTH OUTCOMES

Major Heather Ortiz, RN, MSN, DNPC

Health care systems across the United States are aligning their mission and vision with High Reliability Organization (HRO) concepts to instill a sense of “trusted care” among patients and staff. As healthcare organizations move toward safer practices in delivering quality of care, they must adopt a system of evaluating quality outcomes data that either reflect the need for improvements, or showcase their best practices. Wilford Hall Ambulatory Surgical Center has employed quality and safety measures within their large ambulatory care center in South Texas as a tool to evaluate health outcomes as a result of delivery of care. The center promotes their vision of building a culture of safety to prevent patient harm through communication, education, and employment of patient-centered care teams that research and implement evidence-based practice (EBP) within the organization. The center recognizes that nurses are the largest group of health care professionals and have the most interaction with patients, and has worked over the last six months to develop leadership roles for nurses on the Patient Centered Medical Home (PCMH) teams, designating them as “nurse champions.” Joining the forward movement of transforming the large center into an HRO, these nurse leaders have taken the charge of becoming champions to effectively illustrate the vision to sustain a culture of trusted care through piloting nursing processes for improving HEDIS metrics and patient outcomes. The nurse champions facilitated EBP in medicine through identifying the need for improvements in care delivery, implementing transformational processes, and evaluating measurable outcomes. The data extracted revealed which nursing processes for proactive patient management were effective in improving and sustaining metrics at or above the benchmark. The nurse champions coined the first evidence-based practice improvement, and the nursing processes are being implemented across all five PCMH teams. Data supporting effectiveness of the EBP among the health care teams will be utilized to support implementation across the entire ambulatory care center as the administration strives to achieve Magnet status.

DISCLAIMER
The views expressed in this article are those of the author and do not necessarily reflect the official policy or position of the Air Force, the Department of Defense, or the U. S. Government.
RESEARCH-RELATED ACTIVITIES:
GENERATIONAL DIFFERENCES AND PREFERENCES

LTC Kristal C. Melvin, PhD, NP-C¹, Donna L. Belew, MSN, RN²,³, & Bonnie M. Jennings, PhD, RN, Colonel (US Army, retired)⁴

¹Center for Nursing Science & Clinical Inquiry, Brooke Army Medical Center, Fort Sam Houston, Joint Base San Antonio, TX.
²The Geneva Foundation, Tacoma, WA.
³Center for Nursing Science & Clinical Inquiry, Madigan Army Medical Center, Tacoma, WA
⁴Nell Hodgson Woodruff School of Nursing, Emory University, Atlanta, GA.

BACKGROUND
Recruiting appropriate and adequate numbers of participants for research studies is a challenge. Multigenerational recruitment for two ongoing research studies heightened our awareness to this challenge. Research-related activities such as recruitment, communication, data collection, and interview techniques that attract participants from one generation may be unsuccessful and even unappealing for another generation of potential participants. The purpose of this presentation is to examine generational differences and preferences in responses to various research-related activities.

MATERIALS & METHODS
Our data come from 3 different studies, two of which relate to couple functioning after combat deployment and one about military nurses’ wartime experiences. We became aware of differences between generations effecting recruitment, communication, and data collection, to include interviews. A matrix was created to specify (1) recruitment, (2) communication, (3) data collection and (4) interview techniques used in each of these studies. Then constant comparative analysis was used to assess our most successful approaches to these four aspects of research across a broad spectrum of generations.

RESULTS
Generational differences were found among the four aspects of our research activities. In recruiting young active duty military couples (mean age 28.6 years) from all military services, we initially tried posting flyers on military approved bulletin boards. When this method failed to produce an adequate sample, we found that sending study information to the administrators for military spouse groups’ Facebook pages was a free and effective recruiting tool for a young and highly mobile target audience. Over 75% of recent recruitment has been from social media-related sources. By contrast, when recruiting older, recently retired or separated service member couples (mean age 45), we found print advertisements in military-related publications to be most successful. Both age groups preferred telephone interviews, via Skype-to-phone technology, over in-person interviews, and preferred communication via texting or email over telephone calls.

Strategies that worked in the two couple’s studies had to be reassessed when we started the study of military nurses’ wartime experience. For instance, veteran nurses from World War II (ages 90-110) and the Korean War (ages 80-95) responded best to hard copy recruitment flyers, paper survey forms, hand-written notes and thank you cards, rather than electronic mail. Moreover, some of these participants did not have computers at all. In-person interviews were preferred by these generational groups. By contrast, Vietnam War nurses (ages 60-80) responded well to webpage advertisements and preferred communication via electronic mail rather than by telephone. Vietnam nurses were equally responsive to technology-supported or in-person interviews.

CONCLUSION
The authors discovered a need for built-in flexibility toward participants, depending on their generation-specific preferences. To be successful with research-related activities such as recruiting, communication with participants, collecting data, and interviewing study participants, investigators need flexibility and sensitivity toward generation-specific expectations.

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**PRESENTATION 4 | POLICY, PRACTICE, COLLABORATIONS**

**VETERAN STATUS AND HEALTH LITERACY: A POPULATION ANALYSIS**

**Pamela S. Willrodt, M.S.**

Department of Demography, College of Public Policy, The University of Texas at San Antonio

**BACKGROUND**

Few previous studies have attempted to assess health literacy (HL) in Veterans. Those studies were conducted in a small number of VA facilities using a variety of differing HL assessment instruments with differing HL levels and results. This study examines HL in Veterans using the National Assessment of Adult Literacy (NAAL).

**METHODS**

Male Veterans (n=2,203) were compared with male NonVeterans (n=6,540) in three age groups (16-49, 50-64, 65+) to determine how mean health literacy scores (MHLSs) differ and to determine if any association exists between self-reported health and HL level. Results were calculated in the NAAL proprietary A.M. software.

**RESULTS**

MHLS was higher in Veterans than in NonVeterans in two age groups: 16-49 (261 v. 246, p<0.001) and 65+ (219 v. 199, p<0.05). At each age group and each self-reported health grouping (excellent/very good, good, fair/poor) Veterans have higher MHLSs than NonVeterans, except in the 50-65 age group; Veterans who report excellent and/or very good health have lower MHLSs than NonVeterans. Given the four levels of HL (Below Basic [0-184], Basic [185-225], Intermediate [226-309], Proficient [320-500]) used in these data, Veterans have the advantage compared to NonVeterans in both the 16-49 and 65+ age groups. However, Veterans in the 50-64 group have a less optimal level of Basic HL as well as Proficient HL compared to NonVeterans in the same group.

**CONCLUSIONS**

Overall, Veterans have higher MHLSs than NonVeterans. However, a different dynamic is at work in the 50-64 age group, those who would have been of age to serve in the Vietnam War.
FOCUS AREA: HEALTH LITERACY AND COMMUNICATIONS

TRAVIS ROOM (HUC 2.202)
CONTEXTUAL ANALYSIS OF PUBLIC ATTITUDES AND OPINIONS ON FACEBOOK TOWARDS THE VETERANS HEALTH CARE SYSTEM

Art Villarreal

With health care concerns related to the Veterans Health Care System (VHCS) seemingly out of the media spotlight, individuals have increasingly turned to social media, such as Facebook and Twitter, to voice their opinions on the quality of care offered within the VHCS. Drawing on social scientific and interpretive approaches in Communication Studies, this paper seeks to provide a systematic analysis of people’s attitudes and opinions towards VHCS, as they circulate on Facebook. More specifically, we will be drawing on content analysis tools and Coordinated Management of Meaning model (CMM), whereby individual responses to varied media posts and media events (related VHCS) will be analyzed. This research, we argue, will provide significant insights about the current and shifting images, attitudes and opinions that people have about VHCS as an important health care provider in America. Given that the mainstream traditional media has not actively been engaged in reporting past health care issues related to the VHCS, it is critical that more attention is paid to social media that has emerged as an alternative forum for sharing stories and voicing opinions and concerns. Findings from this research, we hold, will also provide organizations such as the VHCS an instrument as well as an evidence-base, that they can use to collaborate with their consumers to foster trust, to enhance initiatives to provide better health care, and to repair their public image overall.
FAMILY TALK: HOW DO CHILDHOOD CANCER AND OTHER CHRONIC ILLNESSES IMPACT SIBLINGS’ COMMUNICATION?

Kristen Sinclair, Viviana Rojas, Khan Shamshad and Karen Daas

The aim of this study is to determine if a sibling’s cancer or chronic illness changes the way siblings communicate with family, friends, and the outside world. Healthy siblings, who are now adults, are asked to recall memories of communication during the diagnosis and treatment of their sibling’s cancer or chronic illnesses. Ten adult participants are being interviewed to find out if their sibling’s cancer or chronic illness event changed how the family communicated with one another, and in turn, shaped their present interactions. Through in-depth interviews and oral histories, participants recall their everyday experience and the changes in their families after diagnosis and treatment of the chronic illness. The guiding questions for this study are as follows. Is there a change in the communication patterns between healthy sibling survivors, parents, and others after diagnosis and treatment? If so, how did the change in communication frame present interactions? There is abundant information on the impact serious illness has on the cancer survivors of all ages, but limited research on how the sibling are impacted by a serious illness within the family. There is a gap in the literature pertaining to how a serious illness changes the sibling’s behaviors, more specifically changes in patterns of interaction and dialogue. The purpose of this study is to develop intervention programs to help families cope with childhood chronic illnesses in which communication and dialogue are used as a therapy tools. In this study, we use family system approach, symbolic interactionism, and phenomenology, to understand the experience of self and others.
BACKGROUND AND SIGNIFICANCE
The value of Diabetes Self-Management Education (DSME) is well established as a critical component to improve glycemic control, self-care, and decrease the overall cost of care. However, comprehensive education programs are not available to many individuals within the Department of the Defense (DOD). The Military Treatment Facility (MTF) may not have adequate staffing to support the program and the local area may not have a recognized program available for referral. The solution for providing quality education to all beneficiaries may lie in the innovative use of telehealth.

METHODS
The Diabetes Center of Excellence (DCOE) partnered with the Disease Managers (DMs) at Randolph Air Force Base (RAFB) to pilot a program providing DSME via the Military Interagency Satellite Training System (MIST). The DSME program is a series of 4 two-and-a-half hour classes providing the components of diabetes education as defined by the American Diabetes Association (ADA). A working group was established to define roles, develop policy and tools, and evaluate cost effectiveness and patient outcomes. A trial run of all four classes was conducted utilizing the RAFB DMs as participants to familiarize with the material presented and to identify problems with the technology during broadcast. The DCOE provided training to the RAFB DMs on the patient assessment requirements, evaluation surveys and documentation tool prior to initiation of pilot.

RESULTS
Utilizing in-place technology, DSME classes are provided to participants at RAFB once a week. Documentation tools minimize added workload for the originating site and ensure proper coding and documentation for workload credit and third party payment. Preliminary results will include patient and provider satisfaction, changes in patient behavior, attitude and knowledge about diabetes management, and cost analysis.

CONCLUSIONS
Providing DSME via telehealth using established technology can be an economical and effective method of providing quality comprehensive diabetes education to all DOD beneficiaries located at MTFs in resource poor locations at minimal cost. In addition, this model may translate to civilian healthcare systems as well, as disparity in DSME access is also a common issue.
TREATING TABOO: HIV/AIDS AND MEDIA CAMPAIGNS

Ritasha Sharma and Shamshad Khan

Department of Communication, College of Liberal and Fine Arts, University of Texas at San Antonio

Having reviewed a lot of Public Service Announcements (PSA) campaigns focused on the issue of HIV/AIDS, we never really thought that there might be any room for more research on the topic. However, our critical examination reveals that there is a small and yet significant section of the society which is rarely ever addressed in these media campaigns—commercial sex workers. This demographic, because of the nature of their work, is inherently at a high risk of HIV infection. It’s ironic that although media campaigns have remained typically focused on removing the taboo around HIV, but the way these campaigns are designed often add another layer of taboo or silence—i.e., taboo or silence that circulates around the everyday lives and experiences of commercial sex workers.

Our paper will present findings from our research on the nature of major PSA campaigns against HIV/AIDS across the globe, outlining what is being done, how these messages are designed and communicated, and whether these messages are reaching every ear possible and making impact. We will demonstrate how these PSA campaigns, despite being well-intended, often perpetuate dominant values and ethics in society that disenfranchise certain communities—especially commercial sex workers, that need most help in protecting themselves from the virus.