

# HIGHLIGHTS FROM AMSUS 2019

*Cpt Jacopo Frassini, MD*



As a member of the NATO Centre of Excellence for Military Medicine (MILMED COE) I had the privilege to join CDR Katherine Noel, MILMED COE Department Head, in representing our organization at the 2019 AMSUS annual meeting in Washington DC. AMSUS is the Society of US Federal Health Professionals serving as a communication platform for the advancement for health professionals in all federal health agencies including Department of Defense, Veterans Affairs, Health and Human Services, Department of Homeland Security, as well as other nations. AMSUS is a non-profit member-based educational and professional development association, giving voice to federal health professionals and sponsoring interagency healthcare collaboration. Members, invitees and other participants meet once a year to share experiences, outline future perspectives and coordinate efforts in healthcare within USA and among their partner nations.

## **02/12/2019: DAY 1**

On Monday, afternoon sessions started right after my registration at the international desk and kind welcome by Col Jim Fike and BG De Picciotto, permanent AMSUS members delegated to international representatives. Of the four different events, the participation in the course for **Battlefield Acupuncture** represented a test for the effectiveness of this method in pain management of suffering soldiers. I have always strongly believed that military medicine is very tactical in its nature and must challenge any innovation in order to achieve best standards of care and outcomes. Obviously, we cannot consider this technique mature enough to be included in critical care at point of injury as the name may recall but based on my personal experience, I have always believed that there is something still uncovered about the effectiveness of pain medications in

deployed populations. Probably, mood variations and distance from home may affect perception of pain and increase the risk of overconsumption and of recurrence to prescriptions of pain killers. The course offered by the team of Col Lewis A. Hofmann (in cooperation with USAF Acupuncture and Integrative Medicine Center at Joint Base Andrews, Maryland) provided an effective overview of how the US Air Force is leading the project started more than 15 years ago by Col. Richard Niemtow in outpatient settings and operations on the basis of traditional studies and selected clinical trials. Many interesting implications for future initiatives were proposed such as the **combined use of acupuncture with conventional treatments to reduce the dosage of pills or for preparation of patients before long-range air transfers**. The practical demonstration and training focused on the CTOPS approach with the five needle point locations in the ear. The procedure is straightforward, clean, safe and easy to learn. At the end of the 2-hour individual practice on silicon ears, all the participants had finally the chance to perform the procedure on another participant. Personally, I found it painless and who was already affected by some kind of musculoskeletal discomfort reported a significant benefit after only few minutes of the first needle insertion. The longstanding experience in acupuncture since 2001 cited by the Integrative Medicine Center is said to be effective in about 80% of patients, which is certainly a promising perspective for the reduction of pain medication overuse especially in the actively combat force.

### 03/12/2019: DAY 2

The opening ceremony was addressed by Gen. John M. Cho, AMSUS CEO, and Gen. Ronald J. Place, Honorary President, who thanked all contributors to the success of AMSUS mission in advancing medical knowledge and quality of health through **interagency collaboration** and in conjunction with international coalition partners. Secretary of Health and Human Services, Alex M. Azar II, and Congressman Brad Wenstrup (R-Ohio) highlighted how all efforts to provide the **best standards of care require significant resources** in terms of well-organized manpower, budget administration, cooperation among services that must be focused on the most relevant threats to public health and optimized to support the most vulnerable individuals. Military medicine is a wide concept that must achieve results with its **holistic approach** in three main areas: combat readiness of the fighting force, combat readiness of the medical force and healthcare for families and retirees. But again, the main objective is directed to enforce all those preventive measures that can keep people healthy longer.



MHS GENESIS, the new electronic health record for the Military Health System designed to connect and integrate all medical and dental information across the continuum of care, from point of injury to definite care in either outpatient or inpatient solutions. This new technology provides enhanced, secure environment to manage health information 24/7 worldwide and provides access to medical information to beneficiaries



and healthcare professionals. MHS GENESIS is supposed to replace legacy healthcare systems in the next few years starting from the Pacific Northwest also contributing to create new opportunities in clinical research with largest numbers and helping effectiveness of business strategies.

The role of innovation in driving healthcare transformation was discussed by a panel of three experts. Terry M. Rauch explained how **new concepts of healthcare must be developed** in order to keep the casualty fatality rate at about 10% as we know it to be in current operations but with the new expected challenges of future warfare in more contested scenarios where there will be more need of critical care capabilities in close contact to the battlefield with increasing difficulties to deploy medical practitioners so far forward. Some solutions are already available but must be well coordinated across the whole spectrum of care from point of injury to rehabilitation or even starting in the phases of research designed to optimize performance in either individuals and teams.

Paul R Cordts showed how MHS innovation strategy starts from a reliable method to identify innovative ideas that address current or future needs. Then ideas are selected and processed into viable products that are supposed to **improve performance with creative solutions**. Finally, solutions must be backed, sponsored and distributed in order to be delivered through the whole system and result in increased health benefits to the force and combat readiness. All requirements affecting human capital, culture, funding, infrastructure, partners and networks must be considered and addressed to foster an enduring and successful innovation program.



Col. Christopher Ivany closed the session identifying the difference between innovation defined as the capacity to create **disruptive changes** to solve a problem and improvement defined as the action of making something that is already done in a better way. Research is not directly connected to solutions but rather reflects the development of knowledge. Thus, due to its disruptive nature, innovation must be a reliable and predictable process across NHS to engage realistic initiatives with **patient-centered solutions**. The most

successful innovations generally solve simple problems that affect multiple beneficiaries in day-to-day situations. Processes must be frequently managed by cross-functional teams of experts to provide a comprehensive approach to the problem. Stakeholder engagement within NHS and with other organizations is required to enable project development and make specific resources available. And finally, constant senior leader-level attention and support is required to keep the process of innovation sustainable within the system during its lifecycle.

The Global Health Distance Learning Program is an international initiative for graduate education healthcare providers worldwide. The Program Director, Col. Brad Boeting from Uniformed Services University, has the primary mission of providing high quality teaching in global health and secondly to facilitate interaction of different cultures through **health diplomacy** and academic exchange. Currently, the project is supported by UK and other countries with lecturers for specific topics for example in human rights to achieve with partner nations security cooperation objectives by fostering collaborations in the healthcare domain.

#### **04/12/2019: DAY 3**

The day started with Adm. Brett P. Giror, assistant secretary of health at HHS, who illustrated the modernization process of USPHS initiated in 2018 and currently in the implementation phase where specific recommendations will be given to subordinate bodies and IT systems will be improved to support enhanced readiness in the reserve, more effective training and HQ procedures. The current challenge consists in a constant increase in demand for deployments that between 2013 and 2019 contributed to the execution of 140 different missions. Among the top 4 entries, officers were deployed in natural disasters, public health crises, diplomatic events and remote area support, with 1136 of them awarded for the 2017 hurricane response. Commissioned corps distinguish for a high readiness profile during national and global emergencies in order to **provide direct healthcare, leadership and expertise to populations most in need**. The undergoing implementation of a ready reserve with recruitment and retention in the areas of more need will help achieve the modernization requirements by reducing non mission-priority positions and investing in professional development for the regular corps. At the same time, a ready reserve will guarantee response capabilities and enable access to specialized providers. Thus, training of highly effective teams in the areas of incident response and of community healthcare support is considered a key factor to align mission requirements to capabilities. Specific newly established centers will promote innovation and facilitate the development of technologies in healthcare for national security.

VAdm. Jerome M. Adams, US Surgeon General at USPHS, addressed the **priorities in preventive and interventional measures** to be enforced in current national diseases of greatest concern such as substance misuse (opioids, tobacco, E-cig, THC). The relative accessibility of such drugs and commercial products increases the risk of underestimation of the real dangers for health and of significant negative impacts on readiness of uniformed services that seem likewise or even more exposed. The current guidelines for Americans on nutrition and physical activity are universal recommendations to preserve a healthy lifestyle in the general population and should also be considered as a basic education for the uniformed service members.

Richard Stone, Executive in charge for VA, explained the hard work of assisting with high standards of care veterans who leave a close-knit community of the military and enter a fractured society unable to offer the expected relational support. VA has numerous engagements in education and training, delivery of care, research and emergency response. The most relevant effect is the **reduction of disparities in care accessibility** where outcomes for certain diseases such as prostatic cancer in black males is similar across different social and economic classes. Many efforts have been invested in the restoration of thrust and efficiency of the system of care delivery to overcome recent procedural shortfalls. And now more than ever the objective of building a high reliability organization and committed to **“zero harm”** must be supported by

expertise and resources. The way ahead is led by the implementation of quality processes to enhance safety and performance to achieve shared goals across the organization.

In the afternoon a panel of four representatives from four Centers of Excellence (Hearing CoE, Psychological Health CoE, Traumatic Brain Injury CoE and Vision CoE) explained how effective the collaborative model among them can be to provide a detailed cutting-edge awareness in their areas of interest. US Centers of Excellence foster and promote the prevention, diagnosis, treatment, rehabilitation, education and research focused on specific health problems affecting U.S. military personnel and Veterans. Their main objective is achieving the best standards of care to the right stage from point of injury to rehabilitation through the study, production and distribution of best evidence-based practices.



Despite being engaged in different topics, CoEs are united by the same clinical attitude that leads the resulting overall synergy of the military healthcare system in all processes of **knowledge development, management and delivery**. Core functions can be collected in three pillars that continuously interact: research, advice and education. After identification of new needs and gaps by direct surveillance on target populations, collection of evidence and analysis of data are developed in new products such as clinical guidelines. Dissemination of knowledge with advice to Services on training and education of medical professionals or with direct distribution of online resources assists providers to perform the right corrections in achieving expected outcomes. Outcomes are again monitored to become new inputs for new assessments.

Mike Dinneen, Chief Strategy Officer, explained how health system research is aligned to military health system strategy while pursuing three main goals in measuring and improving: **readiness of the force, health outcomes of the served population and performance/affordability in the use of resources**. The strategy map displayed during the presentation showed ways, means and challenges to reach the MHS mission and vision of a world-class, innovative care for the warfighter and families through an integrated system of readiness and health. At first, comparative studies are needed to understand priorities in transforming currency and capabilities within healthcare teams, facilities and functions. Efficacy studies should then be analyzed for reliability and safety in effective delivery of value-based care and finally enhance planning and

management processes during transitional activities in favor of a more structured standardization across services.

**Remote Health Monitoring**, according to the most recent experience in the DREAM project of the US Army, can be a more challenging enterprise compared to expectations. An easy idea such as connecting diabetic patients to a telemonitoring platform with Bluetooth devices that help titrate basal insulin requires coordination of different resources, complex processes and technical expertise in order to start the system and operate the network. Equipment is a key element and should be addressed with a transformational attitude where innovation might be hardly accepted for compatibility issues of military systems and for security and safety concerns of data management. In the future, the project will be further developed in partnership with large ambulatory centers to telemonitor other parameters of fitness (blood pressure, weight, heart rate, body composition...) as a tool to help service members attain combat readiness and to support health in units to preserve the fighting strength.

Cpt. Simon Sarkisian is a sponsor of the **Army Military-Civilian Trauma Team Training** (AMCT3) experience. He is a US Army Medical Officer and Staff Physician at Cooper University Hospital, discussing how the Civ-Mil training increases resuscitative surgical teams' deployment readiness and skillset with the necessary exposure to volume and complexity of trauma patients required to meet professional requirements in the execution of clinical and interventional procedures. The training **partnership with large nationwide hospitals** started in 2018 at five level 1 and 2 trauma centers. Initial embedded teams are expected to be further expanded in size and number of locations in the next few years following three lines of effort: sustainment of skills in surgical and critical care specialties (1-3 years of embedded staff members), refreshing of expertise with periodical rehearsals (3-6 months of individual/team programs to maintain/update proficiency) and specific pre-deployment training (1-3 months of near-term preparation).

Kimberly Marshall Aiyelawo and Melissa Gliner presented how satisfaction **surveys among patients can improve best practices in military medical treatment facilities** and provide a reliable outlook of quality of care in time. According to their studies, the top-ranking drivers for patient experience are mainly related to the human interaction with healthcare providers. So, communication with nurses and doctors is still considered more important for patient satisfaction than cleanliness of the room/facility in recent surveys such as TRISS.

#### **05/12/2019: DAY 4**

Gen. Richard A. Cody, former Vice Chief of Staff of the United States Army from 2004 to 2008, opened the morning plenary session unfolding his experience as a leader in the US Army and linking his personal background to the values representing the funding principles of serving in the military. The Military Health System (MHS) is developing fast to meet current and future requirements, pursuing efficiency more than ever in order to provide a reliable framework for military readiness. A major focus has been dedicated to outline a self-sustainable educational platform in one of the largest US cities, San Antonio, where 80% of patients are non-beneficiaries. Increased costs to deliver high-quality care to an unselected population are refunded by paybacks in clinical and surgical proficiency of military medical professionals. National emergencies represent another important learning field for the MHS. Rescue system shortfalls in the past 3 major hurricanes have been addressed with the deployment of medical support units in exchange for significant operational experience gains. **Leadership** is the key value to manage change as an opportunity towards progress by anticipating and directing effective solutions. **Personal integrity** and **humility** are also requisites for successful achievements for all service members, who sometimes have the chance to accomplish **courageous acts with noble purposes** and become heroes. So, humility is never modesty. Heroes think of themselves less when choosing their actions but don't think less of themselves.

MHS vision has been described by Thomas McCaffery, Assistant Secretary of Defense for Health Affairs. World leaders are moving from a combat supremacy stance to a posture of more subtle cultural influence by means

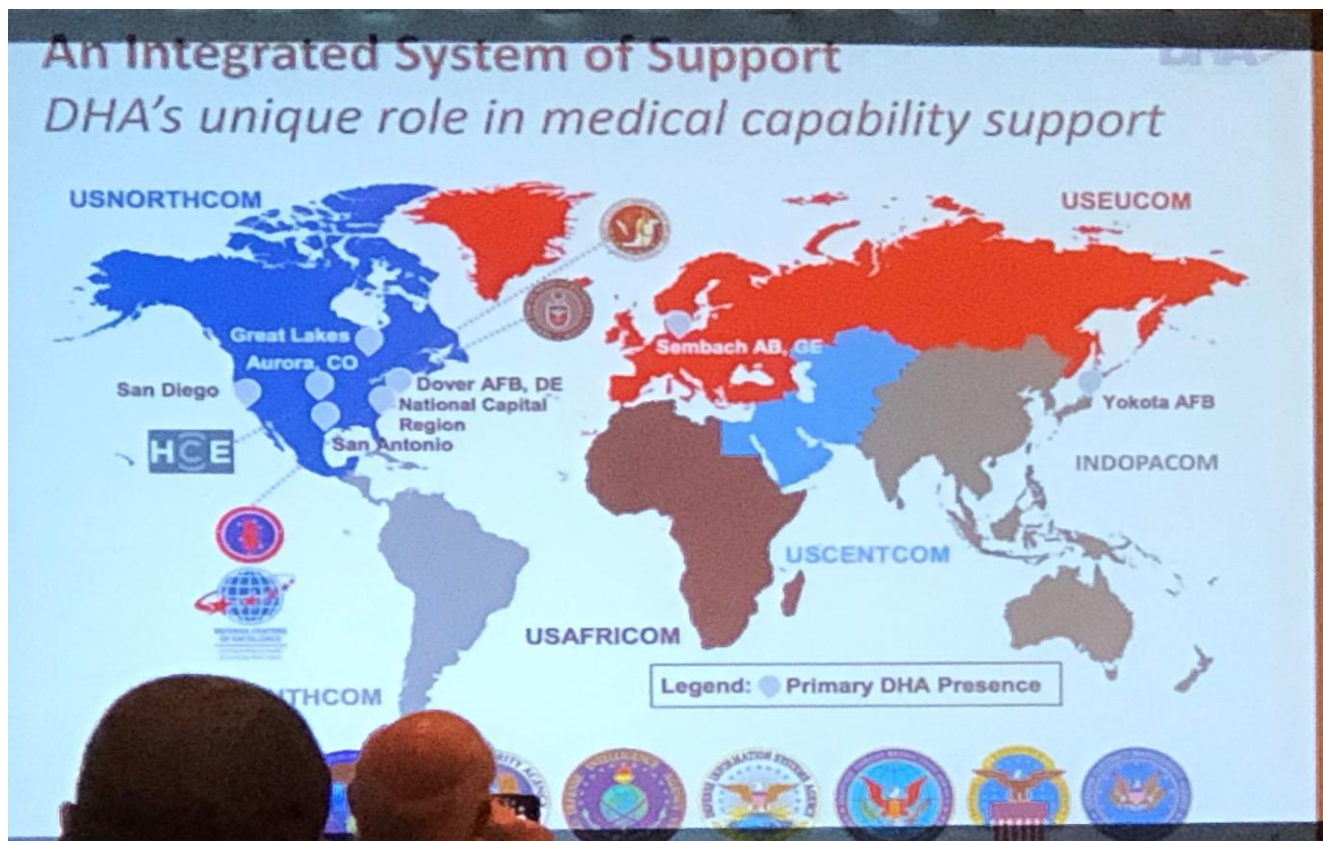


of diplomacy, where **global health interventions and humanitarian assistance engagements** represent one of the most promising opportunities. MHS must accept and meet the challenge to compete globally in this new strategic environment where future engagements will not only require medical support to the fighting force but also will need the ability to create opportunities for dialogue and partnership with specific recipients.



MHS is not a civilian system, must adopt and evolve according to operational requirements and threats with dedication and commitment to succeed in upholding national security under all circumstances. Therefore, MHS has unique responsibilities, functions and costs. MHS mission is combat readiness as the result of contributions from all military health services. Services are mainly responsible for education and healthcare that will still be tailored on specific service needs. However, Defense Health Agency (DHA), currently the single national organization in charge of managing military treatment facilities, is expected to **strengthen standardization, interoperability and coordination with cost-effective solutions**. DHA will eventually direct the process of transition and transformation of MHS with the main purpose of boosting readiness by maximizing all efforts in the processes of modernization and innovation related to the timely delivery of direct care to the warfighters and their families. Increased partnership with civilian and federal agencies is considered an important part of the entire renewal project to share and enhance best practices with all the advantages of a corresponding teamwork focused on a medically ready force and a ready medical force.

Donald Dahlheimer, Deputy Assistance Director, showed how DHA is also advancing as a combat support agency to gather, validate, coordinate, advice, support development and execution of initiatives in the fields of medical information, operational requirements and mission planning with the Office of the Joint Staff Surgeon, the combatant commands, the Services and other MHS stakeholders. Three main DHA Divisions (Operations, Plans and Requirements) oversee specific processes and share the efforts of centrally collecting and disseminating operational medical knowledge to **best focus medical combat requirements in specific strategic contexts**.



Health service support in a globally integrated world must be shaped according to dynamic features. Today's rapidly changing world represent the consequence of disseminated interdependencies that easily spread even local threats across borders, from terrorism to health epidemics to supply shortages to disruptive technologies. Defense and Military Strategies are set to achieve advantage over competitors and adversaries through the integration of joint capabilities in all domains with a national organizational structure able of rapid decision-making processes and of effective unconstrained renovation. New discoveries and technologies are needed and must be trusted to move the purpose of medical support from healthcare to health. New digital ecosystems are providing new models of healthcare and represent the fourth space of medical engagement towards a more precise and personalized outfit. Some realities are still out of current reach. Strategic thinking and leadership are necessary to direct complex systems towards innovation and to challenge existing practices against calculated risks of ambiguity and uncertainty by creating an environment that facilitates proactive team solutions for mission success.

Gen. Lee Payne, DHA Assistant Director, provided examples of how DHA represents the **link between health and security** of the joint force worldwide by leveraging integrated health services to advance readiness in a global effort. Relevant DHA capabilities and assets directed to deliver better medical support are standardized Tactical Combat Casualty Care curricula together with more than 63 Clinical Practice Guidelines from the Joint Trauma System, delivery of blood products within the Armed Services Blood Program, and public health initiatives such as immunization training and infectious disease surveillance. DHA also leverages initiatives to maximize the reserve component medical readiness to keep the medical force always proportioned to mission requirements.

Col. Kevin Mahoney, Chief of Staff in the Office of the Joint Staff Surgeon, noticed how more frequently than in the past medical demands exceed resources. Current operations are facing a new domain of action compared to previous engagements. In 1990s US possessed a competitive advantage over any potential adversary and threats were limited to geographic regions where it was possible to focus operational planning and supporting construct. Today, a return to great power **competition is expected to occur in a multidimensional environment** involving overlapping geopolitical, functional, technological and cultural



domains. The global force posture must be flexible and responsive to these new threats that are losing territorial footprints and will possibly change the medical mission within the overall integrated military strategy.

The way to achieve global integration has been addressed by Gen. Charles Miller, Deputy Director at Joint Strategic Planning (J5). Assessment, providing the analytic foundation for actions, supports the strategic processes of planning, force management and force development. Thus, ***operations and resources can be aligned with priorities and integrated globally*** to provide a lethal, agile joint force possessing a competitive advantage over any adversaries. Senior leaders must be able to make decisions at the speed of relevance in a complex environment through a shared understanding and routine dialogue. The global medical integration according to Col. John Andrus, Surgeon of USTRANSCOM, is reflected by the joint patient movement posture designed to repatriate deployed service members unable to return to combat for medical reasons. About 600 patients are evacuated from operations worldwide each month in non-dedicated FW assets. Most of them are low-priority individuals onboard scheduled flights. However, critical care aeromedical evacuation teams are always ready to provide inflight assistance to the more seriously injured. These teams are generally made by 4 medical providers but can either vary in the number of team composition and in the type of specialties according to medical needs. As part of more complex system, the long-range movement of patients must align to latest military strategies and integrate with new requirements by splitting the current posture into blocks of single capabilities. The overall medical support system can be reconfigured by selecting essential components through leadership to enable the new intended medical function.

#### **06/12/2019: DAY 5**

The last day began with a panel of experts engaged in developing and deploying ideal teams for optimal global health partnerships. Many organizations use teams for global health initiatives such as reinforcing medical capabilities of countries in need of specific interventions for which their self-supporting resources are not proportioned to the challenge. The US experience, collected in a retrospective descriptive analysis of SOUTHCOM AOR initiatives by the University of Uniformed Services, so far highlighted how small, well-prepared, culturally competent, embedded health engagement teams tailored to work with a partner healthcare system achieve mutual benefits, desires military objectives and better health outcomes for either contributors and receivers. The partnership development continuum unfolds through phases reflecting an operational planning process, from an assessment and exploration period to the identification of tailored solutions, to the promotion of specific interventions to the evaluation of outcomes and the sustainment of intended effects.

#### **MAIN FEATURES OF AMSUS 2019**

The overall experience at AMSUS reflects a rapidly evolving US military healthcare system, now more than ever before. Federal agencies and organizations are modernizing their structures, procedures, manpower and technology to be ready to face new national and global threats with integrated solutions. This perspective is very pragmatic in nature and originates from the essential requirement of providing best standards of care in day-to-day, evidence-based medical practice. Main highlights of this 2019 AMSUS annual meeting are related to 4 overarching themes:

**Direct Care:** the clinical stance represents the origin of knowledge and the purpose of progress. Combat readiness is always referred as the core guiding element of military healthcare at all levels, from point of injury to rehabilitation across the whole spectrum of care. Significant investments must be dedicated to achieving best patient outcomes in either service members and veterans, and in either preventive measures and chronic conditions. Reduction of disparities, new technologies and civilian-military interaction are identified as the primary elements to provide improving quality in healthcare delivery.

**Global engagement:** future medical engagements in the new strategic environment will not only need to focus on supporting the fighting force but also will need the ability to create opportunities for dialogue and partnership with specific global recipients. World leaders are moving from a combat supremacy stance to a posture of more subtle cultural influence by means of diplomacy, where global health partnership interventions and humanitarian assistance engagements represent one of the most promising opportunities.

**Innovation:** new concepts of healthcare must be developed in order to keep up with the changing combat environment. New disruptive ideas in all areas under modernization are supposed to improve performance with creativity in order address threats with original solutions and develop operational advantage.

**Leadership:** change must be governed for an effective use of resources and preservation of safety. New ideas must be stimulated in a cooperative environment and transformed into viable projects according to priorities in healthcare. Military leadership implies courageous actions to accomplish noble purposes, representing the best ground for successful initiatives of teams towards clearly defined objectives.

*Budapest, 18/12/2019*