COERCCC Meeting
17-18 May 2017
San Antonio, TX

Meeting Minutes
17 July 2017

Ms. Brianna Premdas

17 May 2017

1). Admin Remarks and Introductions (LTC Cord Cunningham): LTC Cunningham, the Chair of the Committee on En Route Combat Casualty Care (CoERCCC), convened the meeting and welcomed meeting participants. LTC Cunningham briefly reviewed the meeting's agenda. Mr. Dominick Sestito discussed transportation and logistical information for participants.

2). Deployed TCCET Presentation (Dr. Gary Barber): Dr. Barber gave a presentation on his experience as a deployed TCCET team member. During this deployment Dr. Barber was in AFRICOM. There was a 3 person team that consisted of a physician, an anesthesia provider and a CC nurse. There were many challenges in regards to resources and capabilities and limitations were oxygen and power. Training for this deployment consisted of CCATT Basic, CCATT Advanced, EWSC, ATLS, JECC, Dunker Training, ECAC, FC-H and ISOM.

The case Dr. Barber discussed was an ATV rollover and ejection where the patient suffered a presumed L-spine injury. They took spinal precautions and pain management. There was loss of sensation distal to pubis and loss of motor function at L1. The distance from their current location to the next role of care was approx. 500 miles (3-3.5 Hour flight).

Dr. Barber then discussed the TCCET Lessons Learned.

- Utilization of PFC by 18D prior to TCCET evac.
- Non-compressible intra-abdominal hemorrhage
- Use of blood products
    - FDP, TCCET blood products, FWB
- Prehospital Ultrasound (initial and serial exams)
- Teleconsultation

3). JTS Director's Perspective (Col Stacy Shackelford): Col Shackelford discussed the DoDI 6040.47 effective 28 September 2016.

The purpose of the DoDI:

- Establishes policy, assigns responsibilities, and provides procedures to develop and maintain an enduring global trauma care capability that supports a full range of military operations, including a comprehensive DoD Trauma Registry (DoDTR).
- Establishes the Secretary of the Army as the Military Health System (MHS) Lead Agent for trauma care and recognizes the JTS as a DoD Center of Excellence (DCoE).

- Establishes an integrated Combatant Command (CCMD) Trauma System (CTS) modeled after the Joint Theater Trauma System (JTTS), and a requirement to input data into the DoDTR to support unique CCMD mission requirements.

A few months after the DoDI became effective; the NDAA (Sec 707-708) came out and mandated that we establish a Joint Trauma System within the Defense Health Agency (DHA). We will also establish a Joint Trauma Education and Training Directorate. The Joint Trauma System will also enter into partnerships with more civilian academic medical centers and teach hospitals and embed DoD trauma teams with the trauma centers of the medical centers on an enduring basis.

JTS has been participating in Capability Based Assessment (CBA) meetings which are policy setting meetings about problems and solutions. The three focuses for these meetings are Defense Trauma Enterprise (DTR), En Route Care (ERC) and the Forward Resuscitative Care (FRC).

JTS current Performance Improvement Projects focus on combat mortality analysis, prolonged field care CPG's, FTTF CPG metrics, new director's report, case files of the JTS and CCC Conference.

3). Transport Timing Study (Dr. Russ Kotwal): Dr. Kotwal gave a briefing over two projects that are relevant to transport.

Study 1). A Review of Casualties Transported to Role II Medical Treatment Facilities in Afghanistan

This study characterized battlefield casualties who underwent transport from Role I to Role II through data available on type and mode of transport. The method for this project was a retrospective descriptive study using JTS Role II Database. Dr. Kotwal then discussed the details of the results of this study relevant to transport type & mode & time, combat mortality index, mortality, prehospital interventions and prehospital medications.

In conclusion, Role II facilities in Afghanistan received a diverse population of casualties which arrived by various types and modes of transport, most study patients were transported by MEDEVAC Air, and the shortest transport time but highest mortality was seen with CASEVAC Air. In addition to this, the study underscores need to improve prehospital data capture and findings support continued emphasis on TCCC training and standardization for non-medical and medical personnel providing en route care, particularly during CASEVAC Air.

Study 2). The Effect of Prehospital Transport time on survival of US mil casualties in Iraq.

Decreasing time between injury and required medical capability can mitigate morbidity and mortality in critically injured combat casualties. A previous analysis of prehospital transport of U.S. military casualties during Afghanistan conflict depicted time and treatment capability as important factors for casualty survival on the battlefield.

The methods used to conduct this study include a retrospective descriptive analysis of battlefield data examined 34,3623 US military casualties that occurred during Iraq conflict from March 19, 2003 to August 31, 2010. Data from Iraq conflict were compared to Afghanistan conflict and mortality and morbidity outcomes & treatment capability related variables were compared.

In conclusion, reducing time from injury to definitive care was shown to improve survival on the battlefield of Afghanistan. Although detailed data were limited, prehospital transport time and early treatment capability were also found to be important factors for casualty survival on the battlefield of Iraq.

4). CENTCOM Trauma System (COL Stephen Linck): COL Linck discussed what the U.S. Central Command's combatant command trauma system and recognizing its doctrinal and policy requirements. USCENTCOM includes 20 countries including Lebanon, Syria, Egypt, Jordan, Kuwait, Iraq Iran, etc.

USCENTCOMs Area of Responsibility (AOR) Characteristics are as follows:

- World's most energy-rich region
    - 64% of world's petroleum reserves
    - 46% of natural gas reserves
- Strategic choke points
    - Bab al Mandab
    - Suez Canal
    - Strait of Hormuz
- Religious, ethnic, and tribal tensions
- Youth Bulge
    - 15-29 age group constitutes over 40% of the population in 18 of 20 states
- Inadequate economic development, insufficient basic services, and poor governance
- The most kinetic GCC in the last 50 years

USCENTCOM's vision is to see a more stable and prosperous region with increasingly effective governance, improved security, and trans-regional cooperation to counter state and non-state actor posing a threat to U.S. interest. The mission states that USCENTCOM directs and enables military operations and activities with allies and partners to increase regional security and stability in support of enduring U.S. interests.

The current USCENTCOM priorities are to ensure effective posture, strengthen allies & partners, deter & counter state aggressors, and to disrupt/counter VEOs & their networks.

The Theater Health Support Objectives (THSO) are as follows:

THSO-1: Enable, sustain, and optimize theater force HSS

Effects:

- Ready medical forces are employed
- Medically ready forces are employed
- High Quality HSS of the RIGHT scope is delivered

THSO-2: Prepare the theater medically for future contingency operations.

Effects:

- Military forces are resourced and postured to meet future contingency requirements.
- Partner Nation (PN) Forces are capable of medically supporting multi-lateral operations. Mitigate contingency requirements via leveraging access to HN support

THSO-3: Coordinate SCPA to develop and sustain medically resilient and inter operable regional partners.

Effects:

- Regional partners with resilient HSS systems are developed.

CCR 40-7 Clinical Operations Program (6 MAR 17)

- Establishes theater entry medical training requirements
- Monitors medical documentation on patients dx w/ concussion/TBI
- Mandates use of JTS CPGs, CCOPs and TCCC guidelines
- Identifies JTS as the entity providing support and oversight of
    - Trauma care delivery
    - DoD Trauma Registry documentation 3
    - Combat Casualty performance improvement/education
- Establishment and scaling of the CTS with the CENTCOM AOR

Current State:

- CCSG designates regional CTS director(s) as required
- Lead Role 3 senior trauma surgeon designated during low intensity operations
- Lt Col Zakaluzny (OIR) and Maj Plackett (OFS) current regional Trauma Czars with authorities derived via CCF 40-7 and TF-MED CDR Authorities over Role 2-3 units in theater

Potential Gaps:

- Capacity to monitor, no capacity to mitigate QA issues if onsite remediation required
- Requirement for high intensity conflict or O-Plan support

Future Options:

- TAD of JTS SMEs
- RFF CTS staff (JTTS JMD)
- Develop UIC within DHA for deployable CTS augmentation. Allows placement on TPFDD

5). En Route Care Training Assessment (Col Marla De Jong): Col De Jong presented a data-based gap analysis of United States Military En Route Care Training. Evacuation of casualties is a core competency of the U.S. Military Health System. Each military Service trains its en route care (ERC) clinicians and has patient movement requirements. There is no systematic examination of ERC training. The purpose of the study is to analyze curricula for all Army, Navy, Air Force and Joint ERC course, conduct a gap analysis of training and identify areas for future development and enhancement of within-Service or Joint ERC training. Courses across all services were evaluated and interviews were put together. The conclusions of this assessment were that advances in ERC have contributed to unprecedented survival and identified training gaps that apply across U.S. military Services.

6). Ground Evac Working Group (Mr. George Hildebrandt): Mr. Hildebrandt gave a presentation about the Ground Evacuation Working Group from the U.S. Army Medical Department Center & School – U.S. Army Health Readiness Center of Excellence. The purpose of the WG is to provide a forum for coordination and collaboration between the various organizations that have a stake in capability development for ground medical evacuation. The intent is to facilitate crosstalk between stakeholders and enhance synchronization of action between inter-related efforts. The intent is also to provide a holistic view of status of ground evacuation efforts in order to better inform leadership (CDID, HRCoE, etc.)

The vision states that Army Medical Evacuation is focused on combat operations and DSCA support by producing trained, capable, sustainable, properly equipped, modular formations with competent leaders that provide speed, range, mobility, evacuation, and treatment as a combat multiplier in support of

appropriate commanders and agencies. All lines of efforts lead to the end state of Army Medical Evacuation maintains America's trust as an adaptable, capable, and ready force multiplier that enables the combatant commander the ability to respond, prevent, shape, and win while maintaining a 95% patient survival rate.

In the way forward, the WG defines En Route Care, Spectrum of Care, Standard of Care, and Capability of Care as well as identifying gaps based on En Route Care utilizing Ground Evacuation.

7). CoTCCC Update (Dr. Frank Butler): Dr. Butler, Chairman of CoTCCC, briefed the group on the Committee on Tactical Combat Casualty Care (CoTCCC) and their current activities. Pelvic Binders in TCCC have been approved. A pelvic binder should be applied for cases of suspected pelvic fracture, severe blunt force or blast injury with one or more of the following indications:

- Pelvic Pain
- Any major lower limb amputation or near amputation
- Physical exam findings suggestive of a pelvic fracture
- Unconsciousness
- Shock

During examination, pelvic fractures can be identified by pelvic pain, laceration or bruising at bony prominences of the pelvis ring, deformed or unstable pelvis, unequal leg length, scrotal, perineal or perianal bruising, blood at the urethral meatus, massive hematuria, blood in the rectum or vagina, and neurologic deficits in lower extremities.

Dr. Butler also discussed Monty's (Harold Montgomery) Megachange which was unanimously approved by CoTCCC 31 January 2017. The committee has also been working to enhance its social media presence by creating a mobile app set to become available Summer 2017 and by creating the TCCC Podcast which is currently available.

Also discussed was the TCCC Quick Reference Guide. This document will be provided to all TCCC students in PDF form. It contains TCCC Clinical Algorithms, abbreviated TCCC Guidelines, TCCC equipment list, DD 1380 and TCCC AAR, TCCC Evacuation Priority Recommendations, TCCC casualty planning chapter, and the TCCC Medication Reference Sheet.

8). CoSCCC Update (Col Stacy Shackelford): Col Shackelford briefed the committee on its current activities and deliverables. The year one deliverables for the subcommittees are as follows:

Clinical Guidelines Committee
- DOTMLPF analysis of CPGs
- Identify CPG gaps and updates needed

Research Committee
- Research Top 10 priorities
- Journal Watch

Operational Committee
- Optimal Resources for the Deployed Roles of Care

Education Committee
- Tri-Service expert consensus statement on trauma training

- Pre-deployment Joint care Curriculum

Austere surgical team committee

- Austere surgical team guidelines

The next topic of discussion was Trauma Training Lexicon Terms. Col Shackelford reviewed the three levels of lexicon and trauma training standards (proposed).

1). Pre-deployment verification of procedural skills:
During the period, all deploying surgeons will need to attend the existing Emergency War Surgery course within 6 months prior to deployment. Non-surgeon clinicians must attend a military trauma skills course (ex. Army Trauma Training Department, Navy Trauma Training Center, Air Force Center for Sustainment of Trauma and Readiness Skills, or similar intensive trauma skills course) within 1 year of deployment.

2). Periodic assessment of knowledge and abilities aligned with a relevant curriculum.

3). Development of a measurable "readiness" value of in-garrison practice

4). Appropriate remediation when indicated focused on identified deficits

Col Shackelford then ended her briefing by discuss the committee's voting issues. These issues consist of the mission statement, charter, logo, trauma training lexicon, and phased implementation of the specialty KSA project.

9). CoERCCC Update (LTC Cord Cunningham): LTC Cunningham briefed the group on the subcommittees of the Committee on En Route Combat Casualty Care (CoERCCC).

Doctrine/Policy: Col Mark Ervin

- ERC Position Statement/TOR
- Provider Knowledge/Skills/Abilities(KSA's)

CPG/PI: CDR Ben Walrath

- Vampire/Vent CPG's/
- Mercury database

Education/Training: LCDR Erik Hardy

- Comparison CCATT, JECC, FPC, SAR Med Tech, etc.
- Overlap with recommended KSA's for level of providers/teams
- ERC CPG/Education App/Podcasts

Transfer of Care/Documentation: COL Kim Biever

- Standardization of hand off format (i.e. MIST vs SBAR)
- Review of DA4700 overprint for trauma resuscitation and handoff checklist

Research Steering: LTC (P) Andre Cap

- Journal watch(list serve and Podcasts)
- Physiologic monitoring/device review (CRI, REBOA, ECMO etc.)

18 May 2017

1). Administrative Remarks (LTC Cord Cunningham): LTC Cunningham, the Chair of the Committee on En Route Combat Casualty Care (CoERCCC), convened the meeting. LTC Cunningham briefly reviewed the meeting's agenda for the day.

2). SAR Medic Presentation (HMC Wayne Papalski): HMC Papalski briefed the group on his experience with the E18-Growler Mishap. The mishap occurred at NAS Whidbey Island, Oak Harbor Washington which is an island just north of Seattle in the Strait of Juan de Fuca. There was no military medicine or paramedics in Fed Fire. The primary ALS Response was from Whidbey General Ambulance while the secondary was NAS Whidbey Island SAR. HMC Papalski went over the staffing of the Whidbey Search and Rescue Team who in 2016 had 55 missions with 69 lives saved. He then discussed two cases he had while there.

Patient #1

- Frontal Lobe TBI
- Le Fort Fracture III
- Subdural Hematoma/Subarachnoid Hemorrhage Vent/Mannitol/Hypertonic Saline
- 4 weeks on the vent – 5 weeks step down/in patient rehab

Patient #2

- 4 chest tubes total
- Vent for 2 weeks
- ECMO/Extracorporeal Membrane Oxygenation
- PT Stud – Walked out of the hospital 2 weeks early

3). DHA Lexicon Update (Mr. Ed Whitt): Mr. Whitt gave an update on the Defense Health Agency Trauma Lexicon. In 2014, Wall Street Journal put out an article about preventable death rates and questioning what the DoD is doing to fix this issue. Identified policy jobs that say there is a lexicon issue/shortfall. The DOTMILPF changed the recommendations and gave the services a validated requirement.

In order to start working on this issue, DHA went through current policies and JP 4-02 Health Service Support and identified about 37 terms as a starting point to conduct a trauma lexicon workshop. Partnered with the Joint Trauma System, military trauma experts and civilian trauma researchers met in December 2015. Other efforts included updating JP 4-02 and DoDI 1300.18, DoD Personnel Casualty Matters, Policies and Procedures and LoE 2-EMS Fellows published an academic paper on the need for a common lexicon, process to arrive at the lexicon and detailed lexicon.

Future lexicon initiatives include JROCM 048-15: Joint Theater Patient Evacuation DCR (15 May 2015) which involves establishing and publishing in appropriate joint publications common evacuation language across the joint force. Another future initiative is to collaborate between the Global Patient Movement Joint Advisory Board and the CoERCCC.

4). DoDTR and ZBR (Dr. Mary Ann Spott): Dr. Spott gave an update on the Department of Defense Trauma Registry (DoDTR). She first reviewed the structure of the Joint Trauma System (JTS). Most JTS employees are working in the Data Acquisition and Data Analysis branches.

The JTS continuous performance improvement cycle aims to provide actionable trauma and combat casualty care information to COCOMS/Services. As well as:

- Develop and assess best practices across entire continuum of care
- Identify and close capability gaps
- Shape education and training
- Inform operational decisions

What is a registry? A registry is a compilation of identified information taken from the medical record, expert clinical inference, scoring and coding schematics, probability determination and performance improvement data requiring human intervention. Dr. Spott then went over the difference between performance improvement and research in regards to the DoDTR. Research has very defined parameters while PI is only used for specific purpose.

Besides the DoDTR, we currently have other clinical specialty databases such as Military Orthopedic Trauma Registry (MOTR), Infectious Disease, Acoustics, Pre Hospital Trauma Registry, TACEVAC, Role II, and other modules such as TBI, Eye and MERCuRY.

Dr. Spott then went on to explain the Zero-Based Budget Review (ZBR). ZBR is a consolidation effort from the DoD CIO which calls for consolidating all registries to save $1.6 billion. The goal is to determine if all registries can be incorporated in some manner to the electronic health record (EHR).

5). TRANSCOM Update: Global Patient Movement (Col Paul A. Friedrichs): Col Friedrichs presented an overview of Global Patient Movement (PM). During his presentation he discussed the history of global patient movement back as far as WWII D-day.

Col Friedrichs presented a US Marine who developed a severe pneumonia while on a ship in the Indian Ocean. He was transferred to a US Naval hospital and his lung function continued to deteriorate, so a team of US Air Force, Army and civilian specialists were brought to him and placed him on a lung-bypass machine, then flew him to Hawaii. He eventually had to be moved to an even higher level of care on the US mainland, so the team was reassembled and they safely moved him again. Today, he is fully recovered from his illness. With today's medical technology, our military medical colleagues can deliver incredible care almost anywhere and we look forward to continuing to work with our international partners to share best practices in order to improve the care each of us provides to our nations' military men and women.

Continuous En Route Care moves a patient from point of injury (POI) through consecutive levels of care to a long term or definitive care facility. The Intra-theater (First responder care and forward resuscitative and Theater hospital care) are managed by the Geographic combatant command. If movement is required out of theater, the GCC works with TRANSCOM Patient Movement Requirement Centers (TPMRCs) to coordinate strategic Inter-theater movement with USTRANSCOM.

Current Opportunities include coordinating the gaps and seams along with the national military strategy which is patient movement intrans regional, multi domain and multifunctional conflicts.
Way Ahead:

- Evidenced-based En Route care: DTE & USTC CPGs
- GPM TTPs for cyber-compromised En Route Care
- Automated decision support; new TRAC2ES

- GPM for Attrition + CBRNE + NEO + HCID
- Development of joint, inter-operable, multi-modal PM capabilities…USTC CBA
- Include CoERCCC in GPMJAB

6). Casualty Centered Evacuation (Col Mark D. Ervin): Col Ervin gave a presentation on Patient-Focused Patient Movement. The focus is to move forward with the Joint Trauma System on Clinical Practice Guidelines (CPGs) and outcome research, re-engineer TPMRC/Patient Movement (PM) management, and partnering with services on multi-modal PM.
Future innovations include a Joint IT solution for end to end communication which focus on standardized data elements; joint SOP patient regulation and strategies for JAM-GC environment. Future innovations also include collaborating on standardization across Services, multimodal patient movement and interoperability in the maritime environment.

Capabilities Development Includes:

- Focus Area: En Route Care Specialty Teams
  - Advanced Lung Rescue Team (ALRT)
  - Tactical Critical Care Evacuation Team – Enhanced (TCCET-E)
- Focus Area: High Consequence Infectious Disease (HCID) Transport
  - Transport Isolation System (TIS) Gen II
- Focus Area: Command, Control, and Coordination (C3)
  - Patient Evacuation Coordination Cell (PECC)

There are 80 plus En Route Care Related Projects and 19 Developmental efforts including electronic healthcare record for AE & CCAT and Wireless physiological patient monitoring.

7). Computerized Clinical Decision Support Capabilities at ISR (Dr. Jose Salinas): Dr. Salinas gave a presentation on Clinical Decision Support and Automation Systems at the ISR. The question at hand is how can we use technology to transition to the commercial world or advanced developers? There are currently different capabilities at different roles of care. How do we push role 4 capabilities down to providers for extended patient holds? How do we develop systems and treatments specific to individual patient needs?

In order to support PFC CONOPS, we need better training, more POI providers and New/Improved Technology Solutions. With this comes improved monitoring technologies, clinical decision support, and automation. Electronic Medical Record thing was originally made for billing. The current system is too complicated and does not help the provider. Therefore, a new system is needed.

Dr. Salinas then discussed the levels of research automation which starts with risk, complexity and interoperability.

- Advanced Graphical User Interfaces (GUIs)
- New Sensor Modalities (better sensors)
- Data Fusion Algorithms (new Indices)
- Decision Support and Diagnosis
- Open-Loop Control and Automation
- Hybrid Closed-Loop Control and Automation
- Full Closed-Loop Control

iFast is technology that will utilize the Doppler Effect to detect motion of blood pools, and has found means to enhance the blood outlines by vibrating the tissue.

Dr. Salinas concluded his presentation by discussing the future (FY 19 and beyond) as far as ASA (ALT) Directed Programs. The three topics were Autonomous and Unmanned Medical Systems (ISR/TATRC), Medical Robotics (TATRC) and Virtual Health (WRAIR/ISR/TATRC).

8). Policy and Doctrine (Col Mark D. Ervin): Col Ervin gave a presentation discussing KSA (Knowledge, Skills, and Attributes), ERC Position Statement, and Lexicon. KSA's are important but should be held as a future project. At the next meeting the focus will be on the initial identification of ERC providers for KSA assessment.

The ERC Position Statement should succinctly declare CoERCCC's mission and vision and alight with the CoTCCC and CoSCCC statements. The audience includes line as well as medical leadership. The focus is the casualty, standardization, simplification, outcomes based guidance and continuous process improvement. The goal for the next meeting is to have a draft position statement for full committee review.

Col Ervin then discussed the Lexicon and the need to review pending Joint/DoD guidance first. There is a clear need for common usage of Joint lexicon and clarification of capability terms versus service unit names. Will explore if current lexicon serves a purpose and/or whether new terms are value added. The goal for the next meeting is to have an initial lexicon discussion and provide recommendations to subcommittees and full committee.

9). CPG/Performance Improvement (CDR Benjamin Walrath): CDR Walrath gave an update on the CPG/PI Committees.

There are two deliverables for the next meeting (November 2017). The first is defining the CPG Development Process by identifying gaps, seeking support from academic medical center, using CPG Committee members as editors/reviewers and gaining approval via JTS, TRANSCOM. The second deliverable is establishing a format and the plan is to do this by creating a narrative & algorithm, identifying "best, better, minimum", pitfalls and measuring outcomes.

The initial targets are Ventilator Management (MSgt Whitmore), Ventilator Management- MSgt Whitmore, Blood Products (Vampire - 1SG Voller), Patient Packaging (Lt Col Shinn), an En Route Care Basics (platforms, care considerations).

Future Deliverables include a prioritized list of CPG topics and a Systematic approach to CPG review/process refinement.

10). Education and Training Committee (LCDR Erik Hardy): LCDR Hardy gave an update on the CoERCCC Subcommittee on Education and Training. The subcommittee currently has a membership of 17 individuals. The committee has been divided into two sections which are strategic and education & training. The focus efforts of the strategic group are to identify current lines of effort across the services, identify where the lines of effort overlap and future projects such as ERC CPG, ERC Application and ERC Podcast. The education and training group is focusing on creating building blocks of education and training "knowns", identifying common education and training objectives throughout the Joint continuum of care and defining patient centered ERC Requirements.

The execution plan is as follows:

- Identify common education and training objectives throughout the Joint continuum of care
    - Define the ERC role
    - Education and Training
    - Learning Objectives
    - Training Product end state

- How
    - COL DeJong's Work on Training Gaps as starting point
    - Teams are divided along service lines and roles
    - Teams will produce learning objectives for all lines of effort
    - Cloud based workspace on MilSuite
    - Product: Matrix of Role and Objectives will illuminate commonality of task

- Define Patient Centered ERC Requirements
    - Identify evidence based patient ERC care requirements across the continuum of care from POI to Definitive Care

- How
    - Team crosses service lines
    - Team will use current evidence to identify general ERC patient care needs at each level of transport
    - Cloud based workspace on MilSuite
    - Product: Capability to Match need document

The product expectations are to have a learning objective matrix that quantifies current training capability across the DoD ERC capability, create a ERC Standard Curriculum Based across the Spectrum, and Create or identify a tool for Battlefield Commanders to quickly educate them on ERC Capability.

LCDR Hardy then went on to discuss the different service's ERC Training along with their representatives and lines of efforts.

The overall goals are to one day create a virtual workspace using MilSuite or other alternatives, in two months have initial products returned to the CoERCCC Chair, to continue the planning and development of education support tools and to continue work with stimulated response.

11). Products and Research Steering (Lt Col Jennifer Hatzfeld): Lt Col Hatzfeld gave an update on the CoERCCC Research & Products Sub-Committee. The subcommittee approach was to review the CCCRP R&D portfolio, review the USAFSAM ERC literature review/scoping study, consider existing service requirements, and to have the subcommittee integrating discussion.

The subcommittees Top 10 Research Priorities are as follows:

1. Documentation
    - Identify minimal documentation elements

- Simple, iterative, “what, why, when” supports not only hand-off but also on-going care (memory aide) and research

Hand-offs

- Identify optimal hand-off methods

2. Monitoring
    - Miniaturization, individualized monitors
3. Maintenance of normothermia during ERC
    - Blood warmers
    - Body warmers
    - TBI, fever
4. TBI transport
    - Motion effects
    - Hypoxia/ altitude effects
5. Optimizing timing of DCR & DCS interventions around transport
    - Decision support tools to integrate mode of transport, duration, resources
    - Decision support for staffing transport missions (“intelligent tasking”)
6. Transportation risk stratification
    - Resource-adjusted “clinical stability” risk scoring
7. Physiology of cardiopulmonary decompensation in transport
    - Pulmonary complications, oxygenation
    - ECMO as a risk mitigator
8. Decision rules for intubation/extubation and transport
    - Outcomes associated with transport adverse events, delayed extubation (VAP rates, etc.)
9. Commander’s risk assessment tool
    - Mortality effects of staffing & capability decisions
10. ERC Pain management
    - Assessment, monitoring, dosing

Top product development priorities are as follows:

- “Wand” (wireless scanning documentation device)
    - Record type/timing of interventions (grocery store scanner, RFID)
- Tele-documentation
    - Voice to text, from ground medic to evac team
- Effective blood warmers
    - Rapid, maintain blood functionality
- Individual patient monitors
    - Goes with patient, collects continuous data throughout continuum
- Decision support embedded in monitors
    - Guide DCR interventions, management decisions
- Autonomous intervention systems
    - Ventilation, resuscitation, etc.
- Oxygen concentrators
    - Optimized for transport
- REBOA for transport
    - Linked to monitors, autonomous systems, decision support

12). Transfer of Care/Documentation (COL Kimberlie Biever): COL Biever discussed documentation and patient handoff.

1. Continue mandatory use of 1380
2. Create a DD Form for evacuation documentation for patients moved to surgical capability
3. Create a DD Form for evacuation documentation for patients moved from surgical capability
4. Document the pathway(s) for documentation to get into patient records and to JTS
5. Continue use of MIST for prehospital through ED handoff; create a checklist for receiving person (unit)
6. Continue use of SBAR for all other patient handoffs after the ED; create a checklist for receiving person (unit)
7. Work with Education Subcommittee to integrate documentation training into curriculum for en route care
8. Update the Documentation/Patient Transport CPG and provide to CPG Subcommittee for review/action
9. Continue to search for innovative methods for documentation capture (transcription, video capture, audio transmit, TEMPUS PRO, Telemedicine, use of think tanks for solutions)'
10. Document the top research gaps related to documentation and patient handoff.

Discussion occurred amongst the group on if the current form meets the needs across continuum of care. It was suggested to incorporate information from both the CCAT & PCR forms. During discussion it was noted that there hasn't been a particular meeting about en route care documentation with CERNER. Should there be checklists at different points of injury to pass the necessary information? There should be collaboration with the education subcommittee to ensure it is pushed at training platforms.

Enclosure (1) – Meeting Attendance

CoERCCC Voting Members:
LTC Cord Cunningham
Col Stacy Shackelford
Col Mark Ervin
CDR Benjamin Walrath
Lt Col Jennifer Hatzfeld
LTC Steven Gaydos
CPT Lance Oldorf
Col Jay Johannigman
LTC Neil Davids
COL Kimberlie Biever
LTC Andrew Cap
MAJ John Houk
LTC Mark Jacques
Col Chetan Kharod
CAPT Christopher Lucas
CDR Joshua Tobin
MAJ Donald Keen
COL Mark McPherson
Maj Joseph Maddry
CDR Brendon Drew
LCDR Erik Hardy
TSgt Jerediah Fontanos
1SG James Conway
Maj Alex Keller
SFC Kristopher Hale
Maj Kevin Semelrath
LTC Mario Rivera-Barbosa
LCDR Dominique Selby
LTC Theodore Redman
MSgt Athena Sotak
SSgt Caleb Washburn
CDR Jeff Alton
HMC Wayne Papalski
CAPT Tracy Thompson
LCDR Elliott Ross
TSgt Lawrence Whitmore
SFC Joseph Buatti
1SG Matthew Harmon
1SG Jared Voller
SFC Bjoern Pietrzyk
SFC Branden Coughlin
SFC Joseph Hernandez
Maj Daniel Cox
Col Russel Frantz
CDR Henry Casey
CPO John Leasiolagi
HM1 Richmond Roy

Subject Matter Experts:
Dr. Mary Ann Spott
Dr. Frank Butler
Mr. George Hildebrandt
Mr. Ed Whitt
Col Paul Friedrichs

COERCCC Staff:
Mr. Dominick Sestito
Ms. Brianna Premdas

Additional Guests:
Lt Col Antoinette Shinn
Dr. Elizabeth Bridges
Mr. Dario Rodriguez
Lt Col Vikhyat Bebarta
COL Stephen Linck
Dr. Marla DeJong
Maj Gary Barber
MAJ Nancy Weaver