DEFENSE HEALTH BOARD
COMMITTEE ON TACTICAL COMBAT CASUALTY CARE,
A WORK GROUP OF THE
TRAUMA AND INJURY SUBCOMMITTEE
MEETING MINUTES
November 15-16, 2011
Chesapeake Room
Hilton Crystal City
2399 Jefferson Davis Highway
Arlington, Virginia 22202

1. ATTENDEES

MEMBERS			
TITLE	**LAST NAME**	**FIRST NAME**	**TITLE/ORGANIZATION**
COL (Ret)	Anders	Frank	Retired Command Surgeon for Special Operations Command Africa
COL	Blackbourne	Lorne	Commander, U.S. Army Institute for Surgical Research
Mr.	Donovan	William	Medical Contractor, Department of Defense
Col (Ret.)	Dorlac	Warren	Director, U.S. Air Force Centers for Sustainment of Trauma and Readiness Skills, The University Hospital and Department of Surgery, University of Cincinnati
Dr.	Dunne	James	Chief of Trauma, Walter Reed National Military Medical Center
COL	Eastridge	Brian	Trauma Consultant, U.S. Army Surgeon General
COL	Farr	Warner "Rocky"	Command Surgeon, U.S. Special Operations Command
Dr.	Flaherty	Stephen	Trauma Medical Director, Cape Fear Valley Health System
CAPT (Ret)	Freer	Douglas	Medical Director, Raytheon Polar Services
Dr.	Gandy	John	Emergency Medicine Physician, Shenandoah Emergency Physicians
COL	Jaffin	Jonathan	Chief of Staff, Complex Battle Injury Work Group, U.S. Army Office of the Surgeon General
Dr.	Jenkins	Donald	Chair, Trauma and Injury Subcommittee; Senior Associate Consultant Division of Trauma, Critical Care and General Surgery Mayo Clinic and Foundation
Dr.	Johannigman	Jay	Professor of Surgery, Director, Division of Trauma and Critical Care, Department of Surgery, University of Cincinnati Medical Center
SOCM	Johnson	Shawn	Future Operations Master Chief, Naval Special Warfare Group Two, Logistics and Support, U.S. Navy

MEMBERS (CONTINUED)			
TITLE	**LAST NAME**	**FIRST NAME**	**TITLE/ORGANIZATION**
Dr.	Kirkpatrick	James	Senior Clinical Consultant, Directorate of Doctrine & Combat Development, AMEDD Center and School
COL	Kotwal	Russ	Deputy Command Surgeon, U.S. Army Special Operations Command
LTC	Mabry	Robert	Emergency Services Program Director, San Antonio Military Medical Center
Dr.	McSwain	Norman	Professor of Surgery, Tulane University and Trauma Director, Spirit of Charity Trauma Center
MSG	Montgomery	Harold	Regimental Senior Medic, 75th Ranger Regiment, U.S. Army
COL	O'Connor	Kevin	Physician to the Vice President, U.S. Army
Dr.	Otten	Edward	Professor of Emergency Medicine, Medical Director, Division of Toxicology University of Cincinnati College of Medicine
Mr.	Parsons	Donald	Physician Assistant, Department of Combat Medic Training, Fort Sam Houston
Mr.	Pesquera*	Gary	Medical Training & Operation Specialist
CMSgt	Rich	Thomas	58RQS/CEM, U.S. Air Force
HSCM	Royes*	Glenn	Health Services Rating Force Master Chief, Office of Workforce Mission Support
HMCM	Sine	D. Eric	Command Master Chief, Third Marine Division
Mr.	Strayer	Richard	Special Operations Combat Medic Course Instructor, John Fitzgerald Kennedy Special Warfare Center and School, U.S. Army

GOVERNMENT, CONTRACT STAFF & INVITED GUESTS			
TITLE	**LAST NAME**	**FIRST NAME**	**ORGANIZATION**
Ms.	Bader*	Christine	Director, Defense Health Board
Dr.	Bagian	James	Professor, Center for Health Engineering, University of Michigan
Dr.	Bennett	Brad	Tactical Medical Consultant
Ms.	Davis	Danielle	Senior Administrative Assistant, ISR
Dr.	Butler	Frank	Health Science Research Advisor, U.S. Army Institute for Surgical Research
Dr.	Cain	Jeffrey	Medical Director, McKinney SWAT
Dr.	Callaway	David	Director, The Operational Medicine Institute and Associate Professor of Emergency Medicine, Carolinas Medical Center
GOVERNMENT, CONTRACT STAFF & INVITED GUESTS (CONTINUED)			

TITLE	LAST NAME	FIRST NAME	ORGANIZATION
Dr.	Champion	Howard	Professor of Surgery and Senior Advisor on Trauma, USUHS and President/CEO, SimQuest, LLC
Ms.	Coates*	Marianne	Communications Consultant, Creative Computing Solutions, Inc. (CCSi)
Ms.	Gaviola*	Camille	Deputy Director, Defense Health Board
COL	Hachey	Wayne	Executive Secretary, Defense Health Board
Dr.	Holcomb	John	Professor and Vice Chair of Surgery; Chief, Division of Acute Care Surgery; Director, Center for Translational Injury Research University of Texas Health Science Center
Ms.	Jovanovic	Olivera	Defense Health Board Senior Analyst, CCSi
Ms.	Klevenow*	Jen	Event Planner, CCSi
Ms.	Martin*	Elizabeth	Defense Health Board Analyst, CCSi
Mr.	Middleton*	Allen	Designated Federal Officer, Defense Health Board
Ms.	Peabody	Hillary	Defense Health Board Analyst, Grant Thornton LLP
Dr.	Taylor	Peach*	Deputy Assistant Secretary of Defense (Force Health Protection & Readiness)

*Indicates did not attend meeting on November 16, 2011

The guest attendee list is provided as Attachment A.

2. NEW BUSINESS – November 15, 2011

a. Administrative Remarks

Discussion:

Dr. Frank Butler requested that all attendees introduce themselves. Following introductions, he invited attendees to e-mail him should they wish to deliver a combat medic presentation at a future meeting or know someone who would be a good candidate. Dr. Butler indicated that the CoTCCC will meet on February 7, 2012 in Tampa, Florida and on May 1, 2012 in New Orleans, Louisiana. Following, Dr. Nancy Dickey, Defense Health Board President, provided remarks. She conveyed her gratitude for the Committee's dedicated efforts to advance tactical combat casualty care (TCCC), and indicated that she looked forward to engaging in the proceedings of the day.

Dr. Butler provided an overview of the meeting agenda. He asked members to disclose any potential conflict of interest related to the topics scheduled for deliberation; no disclosures were indicated.

Action/POC: E-mail Dr. Butler with suggestions for combat medic presentation candidates/CoTCCC Members.

b. French Experience with Freeze Dried Plasma

Discussion:

Dr. Christophe Martinaud, Percy Military Medical Center, French Military Blood Institute, Clamart, France, provided a briefing pertaining to the freeze dried plasma (FDP) product developed and fielded by the French military. FDP is manufactured by the French Military Blood Institute and used in military operations overseas, including Afghanistan. It has a two-year shelf life at room temperature; however, once reconstituted (in sterile water), it should be used within three to six minutes. Dr. Martinaud indicated that FDP and fresh frozen plasma (FFP) demonstrated comparable hemostatic properties when tested *in vitro*. He then described an ongoing prospective study that is examining the clinical use of FDP in theater, which was performed at a Role 3 hospital in Kabul, Afghanistan, where FFP is not available. The study has thus far included 87 casualties who were transfused with FDP. Of these, 67 percent were in shock upon hospital admission; the 24-hour mortality rate was 10 percent. Dr. Martinaud expects to receive additional data from the "Clinical and Biological Traceability Sheet." This form is filled out by physicians following every FDP transfusion between February 2010 and February 2011; it has been recently revised to facilitate its completion. No adverse events were reported as a result of the 236 FDP units that were transfused in this study.

COL Steve Swann, Command Surgeon, U.S. Special Operations Command, stated that he had recently visited the FDP manufacturing facility in France, and was collaborating to obtain the French FDP for U.S. troops; he indicated that the facility currently had the ability to manufacture 4,000 units annually, and would have the ability to manufacture 6,000 units annually by next year. COL Swann noted that the French FDP might be ready for fielding among U.S. troops by the end of 2011. COL Russ Kotwal indicated that he had recently visited the U.S. Army Medical Research and Materiel Command (MRMC) at Fort Detrick, Maryland, and found that available data pertaining to the U.S. FDP product suggest that it is efficacious. He stated that safety data are currently being collected; however, the French experience to date suggests that FDP is safe. COL Kotwal noted that the U.S. FDP product was submitted for approval by the U.S. Food and Drug Administration on October 28, 2011. Dr. Butler informed members that various FDP stakeholders recently held a meeting at the White House to discuss expediting FDP to the field.

Action/POC: None.

c. Tactical Combat Casualty Care (TCCC) Update

Dr. Butler indicated that Dr. Steve Giebner's (CoTCCC Developmental Editor) contract was currently expired; however, once the contract is renewed, he would update the TCCC curriculum website with the recent ASD(HA) approved TCCC recommendations issued by the Defense Health Board (DHB) and will send them to the military schoolhouses.

Recent Defense Health Board actions were then reviewed. The Dried Plasma recommendation was approved by the Board and the memo was signed on 8 August 2011. The Tranexamic Acid (TXA) recommendation was approved by the Board and the memo was signed on 23 September 2011. The Combat Ready Clamp recommendation was approved by the Board and the memo was signed on 23 September 2011. The bilateral needle decompression in traumatic cardiac arrest recommendation was approved by the Board and the memo was signed on 23 September 2011. (Note: the TXA recommendation was not signed or forwarded for action by the ASD(HA)).

Dr. Butler noted that the U.S. Army Office of the Surgeon General convened the Dismounted Complex Blast Injury (DCBI) Task Force, which included many COTCCC members. The final report was published June 18, 2011, and was released to the public on September 20, 2011. The report highlights the urgent need to address DCBI, as it is currently the predominant cause of battlefield morbidity. Dr. Butler indicated that the report strongly endorses tourniquet use and includes several recommendations to amend doctrine, including a recommendation for staffing Medical Evacuation (MEDEVAC) platforms with combat paramedics. COL Brian Eastridge indicated that action officers have been assigned to address each of the six strata of the report.

Dr. Butler highlighted a presentation made by COL Todd Rasmussen, Deputy Commander, U.S. Army Institute of Surgical Research (USAISR) at the American Association for the Surgery of Trauma conference on September 16, 2011, in which he surveyed the audience for their perception regarding tourniquet use. Although 87 percent indicated that civilian first responders should be equipped with tourniquets, only 35 percent specified that their local first responders were equipped with tourniquets.

Dr. Butler indicated that Dr. Steve Giebner's (CoTCCC Developmental Editor) contract was currently expired; however, once the contract is renewed, he would update the TCCC curriculum website with the recent approved TCCC Guideline recommendations issued by the Defense Health Board (DHB) and will send them to the military schoolhouses. Dr. Butler then highlighted recently published literature relevant to the CoTCCC, to include "Eliminating Preventable Death on the Battlefield," by COL Kotwal, et. al., in the August 2011 edition of *Archives of Surgery*; the Military Application of Tranexamic Acid in Trauma Emergency Resuscitation (MATTERs) Study, published online on October 17, 2011 in *Archives of Surgery*; and a position statement published in 2010 in *Critical Care* entitled "Management of Bleeding Following Major Trauma: An Updated European Guideline." Dr. Jay Johannigman stated that the latter article cited unreferenced, misquoted statements from the Advanced Trauma Life Support guidelines. He added that he would like to carefully review the references cited in the paper.

Dr. Butler reviewed a case report discussed during the September 29, 2011 Joint Theater Trauma System (JTTS) weekly teleconference, in which a casualty with a gunshot wound to his buttocks, thigh and pelvis, presented to hospital with bilateral thigh tourniquets distal to the sites of injury. The casualty did not incur ischemic injury to his lower extremities. Dr. Butler stated that providers should be reminded to continuously reassess

the patient. Following, Dr. Butler presented a case report discussed during the November 10, 2011 JTTS teleconference, in which a casualty sustained multiple fractures. His initial blood pressure was 108/58 mm Hg. Dr. Butler detailed the treatment provided to the casualty, including the administration of ketamine, and noted that the casualty experienced a subsequent loss of consciousness (LOC). Dr. Butler inquired whether the LOC could have been due to ketamine. Dr. John Holcomb indicated that based on COL Eastridge's published definition of hypotension, the patient was likely hypotensive. LTC Robert Mabry and Dr. Mel Otten suggested that the casualty was provided with an incorrect dosage (overdose) of ketamine. Dr. Butler then reviewed the process by which the TCCC Guidelines were developed and are reviewed and continuously revised, as well as the development of the TCCC curriculum and the military version of the Prehospital Trauma Life Support (PHTLS) Manual.

Action/POC: Update the TCCC Curriculum website with the recent approved TCCC Guideline recommendations and send them to the military schoolhouses/ Dr. Giebner (upon return).

d. Proposed Change to TCCC Guidelines: Management of Traumatic Brain Injury in Tactical Combat Casualty Care

Discussion:

Dr. Otten presented a proposed amendment to the TCCC Guidelines pertaining to the management of traumatic brain injury (TBI). Dr. Otten stated that the issue of optimal management of TBI in TCCC had been raised in a recent CoTCCC presentation by Mr. Win Kerr of the Joint Special Operations Medical Training Center. Dr. Butler asked Dr. Otten to review the TBI literature to determine whether the Guidelines should be revised on this topic. Dr. Otten reviewed the findings of relevant publications with the CoTCCC members, which included information about the optimal head positioning for TBI casualties, optimal oxygen saturation levels, resuscitation fluids, the efficacy of hyperventilation, strategies for reducing intracranial pressure (ICP), and pharmacological interventions to manage TBI. Dr. Otten noted that he had solicited external review of his literature review and proposed amendment to the Guidelines from colleagues with expertise in neurology and TBI.

LTC Mabry commented that the current TCCC Guidelines underemphasize the role of aggressive management of airway and blood pressure, and that this should serve as the primary focus rather treating the clinical signs of TBI, which should be tertiary. The members discussed the use of capnography, and concluded that most medics would not have access to this technology in the field or in the tactical evacuation (TACEVAC) phase of care. Dr. Bullock indicated that in the absence of capnography, a casualty could be hyperventilated at a rate of 16 respirations per minute using a bag valve mask. Members additionally discussed the importance of the AVPU (Active, Voice, Passive, Unresponsive) scale, which members concurred is used much more frequently in theater than the Glasgow Coma Scale to assess a casualty's LOC.

Action/POC: Continue deliberation and potentially hold vote on proposed recommendation during the meeting the following day /CoTCCC members.

e. Proposed Change to TCCC Guidelines: TCCC Skill Sets by Provider Level

Discussion:

Dr. Butler indicated that the members previously developed a list of skill sets by provider level to accompany the TCCC curriculum. LTC Mabry commented that a study he recently conducted demonstrated that the mortality rate of patients treated by Emergency Medical Technicians-Basic was twice as high as that of patients treated by Critical Care Flight Paramedics, underscoring the need to categorize skill sets by provider level. Dr. Butler explained that he had sent a draft version of proposed new skill sets to the CoTCCC members for review. He revised the skill sets in accordance with suggestions received from Mr. Donald Parsons. Dr. Butler noted that a combat paramedic category was added, and that the KING LT® may be considered as a potential addition to the TCCC Guidelines, since it is already included in U.S. Army combat medic kits.

COL Kotwal suggested that Physician Assistants (PAs) be included among the providers on the list. With regard to the application of the CRoC™, Dr. Holcomb indicated that any provider permitted to apply the CRoC™ should also be capable of carrying a litter containing a casualty with a CRoC™ applied. Dr. Jeffrey Cain addressed airway management and inquired why supraglottic devices were specified, and suggested that providers should decide on which device to use. Dr. Butler indicated that the Army had revised its training doctrine to include assessment for shock as a skill taught in the combat lifesaver (CLS) course.

With regard to determining appropriate provider skill level for administering tranexamic acid (TXA), Dr. Butler noted that Dr. Woodson, the Assistant Secretary of Defense (Health Affairs) (ASD(HA)), in his memo of 4 November 2011 did not support the use of TXA outside of fixed medical facilities with the possible exception by medical personnel assigned to SOF units. . Dr. Butler added that the ASD(HA) did not forward the DHB recommendation to add TXA to the TCCC Guidelines for implementation. Mr. Jeff Mott, who teaches the Army Tactical Combat Medical Course (TCMC) and Joint TCMC, stated that he has already taught 660 deploying physicians and PAs about TXA use since the recommendation was approved by the DHB in August.

Dr. Norman McSwain commented that the CoTCCC has a responsibility to develop a training course for physicians, as many physicians are not familiar with TCCC principles. Dr. Holcomb stated that there was a requirement for a unit status report in the Defense Health Program, and inquired why it had not been implemented yet. Dr. Peach Taylor, Deputy Assistant Secretary of Defense (Force Health Protection and Readiness) responded that development of an official DoD Instruction or Directive may take up to two years; in the interim, the Services may implement changes. A discussion regarding the ownership and oversight of the TCCC Guidelines was held. Members expressed

concern that there is not a mechanism to communicate changes efficiently to Line leadership. Dr. Butler indicated that TCCC has positively impacted care and outcomes in units that received Line Commander support. He stated that he would engage Maj Gen Douglas Robb, Joint Staff Surgeon, and the Joint Staff to inquire whether the Chairman, Joint Chiefs of Staff would be willing to engage the Service Chiefs directly. Dr. Holcomb suggested that if "red yellow green" charts were made for all areas of TCCC compliance, as they had been made for the Service combat medic kits, the Services would be more likely to implement recommended TCCC practices.

The CRoC™ was further discussed. A member suggested that it be tested with medics prior to being provided to Combat Lifesavers. Mr. Parsons expressed concern that the CRoC™ would be included among provider skill sets prior to having been fielded within the Army, to which Dr. Butler responded that the CoTCCC has not yet made a recommendation about which providers on the battlefield should carry and use the CRoC. Since the Navy, Air Force and Marine Corps have issued memoranda indicating that any recommendations initiated in the CoTCCC and issued by the DHB would be taken for action, the Army should also be taking the addition of the CRoC™ to provider skill sets as an action item.

Action/POC:

1. Consider proposing that KING LT® be added to the TCCC Guidelines as a tool for airway management/CoTCCC members.

2. Deliberate and potentially vote on skill sets by provider level at CoTCCC meeting the following day/CoTCCC members.

3. Engage Maj Gen Douglas Robb, Joint Staff Surgeon, and Joint Staff to inquire whether Joint Staff Chairman would be willing to engage the Service Chiefs in regard to TCCC Guidelines/Dr. Butler.

f. Pre-Hospital Trauma Life Support TCCC Courses Update

Discussion:

Mr. Mark Lueder, PHTLS TCCC Coordinator, provided an update on the expansion of the PHTLS TCCC training program. He indicated that the program, which is now two years old, has expanded to three U.S. regions and two U.S. military regions. In addition, courses have been delivered in Europe, Latin America, and Canada. Upcoming sites include Colorado, Maine, and Wisconsin. To date, 21 sites have been established, and 214 courses have been taught to a total of 1,688 students. Mr. Lueder stated that the Executive Council is being restructured to include new leaders. In the first quarter of 2012, Mr. Lueder and Dr. McSwain will assist with course implementation in Columbia, and will develop TCCC courses for implementation in Europe, the Middle East, and South Africa.

Dr. McSwain provided an overview of the course recently taught in Ecuador, which included students from Argentina, Bolivia, Brazil, Chile, Columbia, Costa Rica, Ecuador, Mexico, Peru and Uruguay. Dr. McSwain explained that there are three different types of TCCC needs: U.S. military, U.S. civilian tactical, and allied nation military and police. Practice scenarios used in training courses should be comparable to likely situations that providers would experience. Although Mr. Lueder and Dr. McSwain attended to assist, the course in Ecuador was taught in Spanish by local instructors. The instructors developed their own practice scenarios.

Action/POC: None.

g. TCCC Equipment Evaluation

Discussion:

Dr. Ann Yoshihashi, Medical Analyst, Naval Operational Medical Lessons Learned Center (NOMLLC), provided an update regarding the TCCC Equipment Evaluation. The CoTCCC was interested in having a tool that would capture direct input from combat medical personnel about the TCCC equipment they use to care for casualties on the battlefield. NOMLLC converted the questions submitted by CoTCCC into an electronic directed after-action report (AAR) format, and is currently administering the AAR and analyzing its results. Dr. Yoshihashi indicated that there had been 166 respondents as of October 31, 2011. The majority of respondents are Navy Corpsmen. She stated that the AAR is only for those who have treated combat casualties; anyone who responds negatively to this question is transferred directly away from the survey Web site and to the Military Health System's (MHS) Web site containing the TCCC curriculum. Dr. Yoshihashi requested that members share the AAR link (previously provided to members by Dr. Butler) with eligible medics.

Dr. Yoshihashi highlighted several survey findings, including the frequency of use and opinions regarding the effectiveness of various tourniquets, hemostatic agents, elastic wound bandages, airway devices, surgical airway kits, chest decompression needles, chest seals, intraosseous (IO) infusion devices, pain medications and hypothermia prevention tools.

Dr. Yoshihashi indicated that the comments pertaining to the Combat Application Tourniquet® (CAT®) were generally positive. Negative comments included that the windlass broke, that the CAT® would not work effectively if blood or sand got into the Velcro®; and in one instance, that more than one tourniquet was required to occlude blood flow. Many respondents indicated that since the ability to improvise is important in a tactical situation, having access to a windlass and cravat is valuable.

Dr. Yoshihashi stated that the comments pertaining to Combat Gauze™ were overwhelmingly positive; however, negative comments included the amount of time required to place adequate pressure to stop bleeding, and that it had to be placed into the wound with significant pressure to stop bleeding. Among the elastic wound bandages,

the Israeli bandage was used most frequently. Other bandages suggested by survey participants included the Oaeles™ bandage and duct tape.

Dr. Yoshihashi stated that regarding airway devices, the nasopharyngeal airway was used the most, but primarily as a prophylactic measure. The endotracheal tube had the highest rating by survey participants. Some participants noted a size issue with the KING LT®.

Many survey respondents had used chest seals, and provided negative comments pertaining to several chest seals, to include that they did not seal effectively, and that medics were required to add tape to achieve an effective seal. The Asherman Chest Seal™ and H&H Bolin Chest Seal™ were the only chest seals currently included in some Service Improved/Individual First Aid Kits (IFAKs) that received significant negative feedback.

The Pyng FAST® IO received the most positive rating and was the most frequently used IO device. One respondent shared a personal story regarding ketamine, in which he stated that no other pain medication provided pain relief for him. However, the survey results suggest that intramuscularly administered morphine remains the most commonly used analgesic.

Dr. Yoshihashi noted that despite the change to the TCCC Guidelines, survey results indicate that the wool blanket is still being used for hypothermia prevention. Dr. Butler commented that the survey respondents would not be able to determine whether the blanket or any other hypothermia prevention device increased core temperature; rather, their responses would only reflect the versatility of hypothermia prevention tools. Dr. Yoshihashi concluded her presentation by indicating that an interim report would be released soon with detailed analysis of the data collected thus far.

Action/POC:

1. Share link to survey with any medics with experience providing casualty care on the battlefield/CoTCCC members.

2. Review interim report from NOMLLC for potential recommendations or revisions to the Guidelines/CoTCCC members.

h. TCCC Equipment Issues:

Discussion:

Maj Brandi Ritter, Research, Development and Acquisition Fellowship Director, Defense Medical Materiel Program Office (DMMPO), explained that DMMPO and the Offices of the Armed Forces Medical Examiner conduct a periodic review of all medical devices left on fatalities received at the Dover Port Mortuary to identify any potential device issues. Maj Ritter provided an update regarding the previously reported discolored sterile gauze discovered in Marine Corps and Army IFAKs in December 2010 and June 2011. Microbial tests performed by Centers for Disease Control and Prevention (CDC) revealed

several types of fungi and bacterial growth on the gauze. She stated that DMMPO is planning a large scale test and evaluation of gauze integrity throughout its lifecycle. Maj Ritter recommended that all Service members inspect the gauze in their IFAKs to ensure that the packaging has not been compromised.

Maj Ritter indicated that anyone wishing to receive DMMPO's periodic "Feedback to the Field" reports should provide their contact information to her via e-mail at brandi.ritter@dmsb.mil. Following, Maj Ritter provided the most recent "red yellow green charts" for the Service IFAKs, and compared it with the chart dated April 2010 in order to demonstrate the significant progress achieved in updating kits. The charts illustrated substantial improvement in ensuring that all IFAKs contain TCCC-recommended equipment. Maj Ritter noted that the U.S. Army will soon be issuing an ALARACT regarding the use of rigid eye shields. Mr. Parsons inquired about the kinds of chest seals included in Service IFAKs, to which Maj Ritter responded that multiple chest seals were being used, to include the H&H Bolin Chest Seal™, HyFin® Chest Seal, and PMI Halo Seal.

Action/POC: Provide contact information to Maj Ritter to receive "Feedback to the Field" updates/CoTCCC members.

i. Comments from Mr. Joe Biden, Vice President of the United States

Discussion:

Dr. Butler indicated that Mr. Joe Biden, Vice President of the United States had planned to address the members personally at the meeting; however, due to other commitments, he was unable to attend the meeting. In lieu of attending, Mr. Biden addressed the CoTCCC via a pre-recorded video. In his comments, Mr. Biden conveyed his gratitude and appreciation for the members and their ten years of service in saving lives and revolutionizing battlefield medical care. He commended the CoTCCC for saving thousands of lives, and expressed that he regretted that not all Americans are familiar with the CoTCCC's important work.

Action/POC: None.

j. Hypothermia Prevention Equipment Testing

Discussion:

Mr. Kevin Joyner, Program Analyst, Research and Development, Family of Field Medical Equipment, Marine Corps Systems Command, along with LCDR Anne McKeague, Naval Medical Research Unit, San Antonio, provided an overview of their study evaluating the effectiveness of currently used chemical blankets against electrically warmed systems (Patient Active Warming Systems). Mr. Joyner indicated that the study was initiated with three chemical systems and three electrical systems; however, one chemical system did not progress to the second testing phase. The pilot study utilizes

Green Man phantoms filled with a muscle/tissue equivalent, equilibrated to a core temperature of 35 degrees Celsius, and containing the Absorbent Patient Litter System. Altitude performance testing has been conducted; preliminary results indicate that the electrical devices are consistent across all tested altitudes. Mr. Joyner stated that the final report will provide a calorimetry data analysis, to include whether an increase in altitude, decrease in temperature or combination of both affects device performance. A member inquired whether the battery life of the electrical devices had been taken into consideration, to which Mr. Joyner indicated that all of the devices were approximately three years old. Dr. Donald Jenkins suggested that since Dr. Yoshihashi's data indicated that medics were also using ponchos and human remains bags in an effort to prevent hypothermia, Mr. Joyner should test these devices against those as well.

Action/POC: None.

k. Combat Trauma Care: Committee on Trauma, American College of Surgeons

Discussion:

Dr. Michael Rotondo, Chairman of the American College of Surgeons Committee on Trauma (ACS COT), provided a briefing pertaining to his recent report to U.S. Central Command (CENTCOM) regarding the future direction of the Joint Trauma System (JTS). He included an overview of the ACS COT and his recent trip to Afghanistan to review the current in-theater health care system. Dr. Rotondo had provided a more detailed briefing regarding his findings during the November 14, 2011 DHB meeting. Dr. Rotondo reviewed the sites which he and colleagues, to include Col Jeffrey Bailey of JTS had visited during their two-week tour in Afghanistan and Germany. He indicated that they found numerous examples of clinical excellence, to include committed leadership and civilians; however, at the system level, there is little integration of infrastructure, which is critical for a system with multiple echelons of care. The final report to CENTCOM includes many detailed recommendations to improve the system of care. The overarching recommendation is that support should be sought from the Service and civilian leadership within Department of Defense (DoD) for implementing fundamental change in the current command structure to position the JTS as the lead agency for assessment, policy development and assurance. Key steps in this proposed way ahead include: obtaining commitment from leadership, transforming the JTS, and sustaining the new system following the transformation. Dr. Rotondo stated that the next steps include: completing a document to be published by the ACS entitled *Joint Trauma System: Development, Conceptual Framework, and Optimal Elements*; creating a JTS Operations "Field Manual"; and developing a tactical implementation plan.

Action/POC: None.

l. Proposed Change to TCCC Guidelines: Ketamine

Discussion:

Dr. Gandy provided a briefing that proposed that the current TCCC Guidelines be amended to include the use of ketamine as an analgesic option. He provided historical background regarding the use of analgesia on the battlefield. Dr. Gandy indicated that morphine, administered intramuscularly (IM), is the primary analgesic currently in use on the battlefield. Additional analgesics include oral narcotics, morphine (administered intravenously (IV)), oral transmucosal fentanyl lozenges, fentanyl IV, Dilaudid (hydromorphone) IV, and ketamine (IM, IV or intranasal). Dr. Gandy explained that ketamine is unique among analgesics because with its administration, pharyngeal-laryngeal reflexes are maintained; cardiac function is stimulated rather than depressed, and it may be administered reliably via multiple routes. Ketamine has a favorable safety profile, and is already being used by multiple Special Operations units, as well as in civilian emergency medicine systems. Dr. Gandy indicated that although current evidence is conflicting, ketamine may raise ICP and is therefore contraindicated in patients with TBI. Members discussed optimal dosing requirements for ketamine.

Dr. Christopher Maani, Chief of Anesthesia, Burn Center at Brooke Army Medical Center, provided additional context to the ketamine discussion. He stated that ketamine is an effective general anesthetic and works quickly; however, at higher doses, it may cause undesirable psychomimetic effects, pro-sialogogue, and cardiovascular stimulating properties. Dr. Maani iterated that the difference between high-dose and low-dose ketamine is critical. He also indicated that recent evidence supports the use of ketamine in neurotrauma patients; Dr. Maani often administers ketamine to his neurotrauma patients. He added that ketamine has neuroprotective properties because it is an N-methyl d-aspartate receptor antagonist. Dr. Maani cautioned that ketamine may result in a cataleptic state, which could last 15 to 30 minutes. In addition, some patients experience emergence delirium reactions. He strongly supported the use of ketamine as a TCCC analgesic option, stating that he would be hard-pressed to find a better drug for this purpose than ketamine.

Action/POC: Review proposed amendment to TCCC Guidelines for deliberation and vote at the meeting the following day/CoTCCC members.

3. NEW BUSINESS – November 16, 2011

a. Administrative Remarks

Discussion:

Dr. Butler called the meeting to order and asked CoTCCC members and guests to introduce themselves. All attendees were reminded to sign the attendance roster. Dr. Butler reviewed the agenda for the day and asked that individuals reveal any financial interests in the agenda items to be discussed. He noted that representatives from Cook Medical were present to act as technical representatives concerning the new airway device to be discussed by LTC Bob Mabry. No other financial interests were declared.

Dr. Butler requested that members and guests let him know about potential candidates for future combat medic presentations.

The next meeting of the CoTCCC will be held on 7-8 February 2012 at the Wyndham Westshore hotel in Tampa, FL.

The letters of congratulations to the CoTCCC from former U.S. Surgeon General Rich Carmona and former Secretary of the Army Togo West were read to the committee.

There may be vacancies on the CoTCCC due to the resignation of Master Chief Shawn Johnson from the committee in anticipation of his beginning medical school next fall and the non-participation of Dr. Luis Ortega. Dr. Butler indicated that the CoTCCC recommended COL Peter Benson, the Command Surgeon at USASOC, and MSG Rob Kiely, the Senior Medic at the 160th SOAR be nominated to replace these two.

Dr. Butler also indicated that (in accordance with the CoTCCC Charter, which designates liaison positions) Mr. Glen Riccio will be the new liaison with the State Department following the retirement of Mr. Lyle Lumsden.

Action/POC: None.

b. New Surgical Airway Device

Discussion:

LTC Mabry provided a briefing pertaining to airway injuries, including instruments and techniques to address airway obstructions and injuries as well as strategies for improving surgical cricothyroidotomies. He conducted a subgroup analysis of Dr. Joseph Kelly's review of military combat fatality autopsies (from 2003 to 2006), in which he found that five out of 13 cricothyroidotomies had failed. LTC Mabry highlighted that the lack of sufficient documentation regarding airway assessments (and subsequent management) is a critical problem. LTC Mabry discussed his findings following a review of limited data available from the Joint Trauma Theater Registry regarding intubation procedures and outcomes. He found that intubations performed at Role I hospitals achieved a statistically significant 94 percent success rate. LTC Mabry also noted a statistically significant increase in the success rate, as well as a decrease in complications and mortality when

Rapid Sequence Intubation was utilized. Provider skill levels did not significantly change success or complication rates.

LTC Mabry reviewed additional data pertaining to cricothyroidotomies, which demonstrated high failure rates. He suggested that easier to use, dedicated equipment, and the application of standardized techniques and training would reduce failure rates. He explained that a new surgical cricothyroidotomy device is currently under development, which would have two pieces to assemble (rather than five, as in the currently used device). He noted that a six-step, rather than 12-step, technique might be easier for providers to implement. LTC Mabry stated that the new device being developed had been tested on 30 cadavers with 50 medics, all of whom successfully completed the procedure immediately following training. Compared to a control group, cricothyroidotomy could be successfully completed in less time. Dr. Bagian suggested that the developers test the tool and technique on the same cohort after a few months. COL Kotwal suggested conducting the training, then conducting the test, and a few months later, repeating the test with the same cohort in theater to see if memory retention is an issue.

Action/POC: None.

c. Combat Medic Scenario

Discussion:

LTC Mabry showed a 30-minute video in which an Afghan National Army Service member stepped on an improvised explosive device (IED), and suffered an amputation of his lower left leg, substantial lacerations to his left arm, and a significant blast injury to his face. The video shows the casualty sustaining the injury and the medic providing care to the casualty in the field. Immediately following the blast, the casualty was apneic for about 30 seconds. The medic quickly applied a tourniquet to the casualty's left leg to stop blood flow. The patient was combative, and continued to try to sit up, and the medic, communicating through an interpreter, repeatedly attempted to keep the casualty in a supine position.

The members then reviewed the scenario. COL Kevin O'Connor suggested that putting a hand on a part of the casualty's body that he could feel, and having the interpreter tell him "we're here to help, you will be okay" may have helped. LTC Mabry indicated that the casualty most likely sustained a TBI as evidenced by the initial apnea. The members discussed the best options for managing the casualty's respiratory problem, given that he was conscious. About half of the members indicated that they would have conducted a cricothyroidotomy immediately. The members also agreed that the medic failed to recognize that the casualty was attempting to sit up in order to improve his airway.

Action/POC: None.

d. Additional Considerations for the TCCC Guidelines

Discussion:

Dr. Jeffrey Cain suggested that the CoTCCC reconsider Zofran (ondansetron) as an option for an anti-emetic in the TCCC Guidelines, as its cost has decreased substantially since it was previously considered. Dr. Otten inquired whether the suggestion was for Zofran to replace Phenergan, to which Dr. Cain indicated that his suggestion was to include both as options.

Dr. Butler inquired whether there was a need to reconsider the site for needle decompression. He noted that a cadaver study suggested that five centimeter needles may not be optimal for anterior chest insertion; the study proposed consideration of the midaxillary site for needle decompression. Dr. Butler noted, however, that TCCC recommends the use of 8 cm needles for chest decompression. Mr. Parsons suggested that if the midaxillary line is used, there may be a problem with blood clogging the line. Dr. McSwain recommended that the TCCC Guidelines provide two options of where the needle may be inserted. Dr. Butler thanked the members for their suggestions, and indicated that they may propose any amendments to the TCCC Guidelines at the February 2012 meeting.

Action/POC: Consider drafting any amendments to the TCCC Guidelines to propose at the February 2012 CoTCCC meeting/CoTCCC Members.

e. Future of the CoTCCC

Discussion:

Dr. Butler noted that member reappointment delays and matters regarding the appointment of new members to the CoTCCC have been ongoing issues. Dr. Butler also noted that the DHB Executive Leadership had in the recent past stated that the CoTCCC would not be permitted to continue its voting procedures as directed in the CoTCCC charter, to include the use of proxy votes, which allow members who are not able to attend a meeting to cast a vote through a designated proxy, who they would select from within the CoTCCC. Dr. Butler stated that DHB Executive Leadership has considered directing the CoTCCC to change its membership structure, as well. Dr. Bagian inquired about the reasoning for these seemingly sudden changes; Dr. Butler replied that he was unsure why these issues were suddenly being raised.

Dr. Butler discussed the following options as potential courses of action (COA) for the CoTCCC to be able to continue its mission of developing best-practice battlefield trauma care guidelines if the current DHB alignment becomes administratively unworkable:

- Become a Congressionally-mandated non-discretionary subcommittee under the DHB in accordance with (IAW) Federal Advisory Committee Act (FACA) paragraph 102-3.25.

- Realign under the JTTS or the USAISR. Dr. Butler noted that the ASD(HA) was not in favor of this option. FACA regulations state that advisory committees that include civilians who are not federal government employees must follow FACA provisions. This option would therefore require a restructuring of the CoTCCC to eliminate all non-Federal employee members. This would avoid the need for FACA oversight of the CoTCCC. Dr. Butler stated that CoTCCC members who are non-Federal employees might continue to serve on the Trauma and Injury Subcommittee; these two separate groups may be able to continue to meet together, and recommendations passed by the CoTCCC may continue to be addressed the Trauma and Injury Subcommittee.

- Movement of CoTCCC out of DoD to the Central Intelligence Agency (CIA). Under the CIA, it is specifically exempted from FACA oversight IAW FACA paragraph 102-3.40. This option might, however, present more administrative challenges than the first two COAs.

- Become a subcommittee of the American College of Surgeons (ACS) Committee on Trauma (COT). Dr. Butler noted that funding would not be provided by ACS under this option; however, other funding sources might be located. A problem with this COA is that it would decrease the ties with the military and its ability to positively impact battlefield trauma care for our wounded service members, which is the CoTCCC's reason for existence.

Dr. Butler noted that the Services currently look to the CoTCCC and the DHB to provide recommendations for updates to the TCCC Guidelines. Dr. Champion indicated that for the first six years of its existence, the CoTCCC was not aligned under the DHB and was able to help bring about improvements in battlefield trauma care solely based on the services recommending the merits of the TCCC concepts. COL Farr stated that at the Special Operations Medical Association conference this year, he was asked who is doing the cutting edge work that the CoTCCC performed two years ago. He suggested to the members that this change is a result of the administrative challenges noted above.

COL Hachey indicated that the CoTCCC was not operating legally prior to coming under the DHB because it had both government and non-government members. He stated that such a committee may only exist as a FACA committee or under a FACA board as a subcommittee. Regardless of where the CoTCCC resides it will still need to comply with the statues governing federal advisory groups. COL Hachey indicated that if CoTCCC became a Congressionally-mandated subcommittee, then the appointment package approval process would be the same as it is now. In response, Dr. Butler stated that the packages would likely be expedited due to the Congressional interest for such a subcommittee, although the appointments would still require coordination through the same offices. Dr. Butler further noted that the DHB was not in existence in 2001, when the CoTCCC was established and that both paragraphs 102-3.40 and 102-3.35 of FACA offer the opportunity for the CoTCCC to be exempt from following the FACA appointment processes. He also pointed out that the CoTCCC is operating precisely as spelled out in its current charter, signed in 2009, which was coordinated with the previous

DHB Executive Secretary and compliant with DHB bylaws at that time. COL Hachey replied that the previous Executive Secretary did not have the authority to approve the CoTCCC charter. He further stated that the CoTCCC charter is not a binding document as it had not been approved by the Secretary of Defense and that the CoTCCC must comply with the DHB charter.

COL Hachey indicated that should the CoTCCC be realigned outside of the DHB, in order for the Trauma and Injury Subcommittee to continue to meet in tandem with the CoTCCC or consider any of its recommendations, the Under Secretary of Defense (Personnel and Readiness) would have to make this request to the Board. Furthermore, he noted that if the CoTCCC leaves DoD then its access to DoD would be limited. He also reminded CoTCCC members that their work group falls under the Secretary of Defense and he or his designee will determine the fate of the subcommittee. The Work Group may provide input but do not have decision authority.

Dr. McSwain suggested that the group could realign under PHTLS; however, members would have to provide their own funding. Dr. Holcomb indicated that since CoTCCC realigned under the DHB, it ceased to provide rapid responses to TCCC issues.

Action/POC: Consider current status and options regarding the way ahead for CoTCCC/CoTCCC Members at the February meeting.

f. Proposed Amendment to the TCCC Guidelines: Addition of Ketamine to TCCC Guidelines for Battlefield Analgesia

Discussion:

Members further discussed the proposal made by Dr. Gandy to amend the TCCC Guidelines to include the option for the use of ketamine as an analgesic in tactical field care. Members agreed that especially given its ease of use, oral transmucosal fentanyl citrate should continue to be the recommended first-line analgesic, with the addition of ketamine as a second-line option. Dr. Gandy noted that morphine, administered intravenously, requires more time than ketamine to produce an analgesic effect. With regard to dosing, Dr. Gandy noted that higher doses may be associated with increased sedation rather than analgesia; as such, a maximum dosage should be defined. Although recommended by one of the DHB members, Dr. Eve Higginbotham, who is an ophthalmology subject matter expert, the members agreed to remove a warning statement that was included in the initial proposal regarding head and eye injuries, and then voted to approve the recommendation. Forty members voted in favor; one member opposed the recommendation, and one member abstained from voting.

Action/POC: Forward proposed amendment to Trauma and Injury Subcommittee for review and approval/Dr. Butler.

g. Proposed Amendment to the TCCC Guidelines: Management of TBI in TCCC

Discussion:

Dr. Otten stated that the Defense and Veterans Brain Injury Center (DVBIC) published "Guidelines for the Management of Concussion/Mild Traumatic Brain Injury in the Deployed Setting," which he recommended the CoTCCC review. He indicated that he would review these guidelines and ensure that any necessary justifications and evidence would be provided for any CoTCCC recommendation that is not aligned with the DVBIC guidelines. Dr. Otten suggested that the issue be further examined at the February 2012 CoTCCC meeting, and members agreed.

Action/POC:

1. Provide DVBIC Guidelines to Dr. Otten/DHB Support Staff.

2. Review DVBIC Guidelines for consistency with proposed amendment to TCCC Guidelines/Dr. Otten.

3. Present Proposed TCCC Guideline amendment pertaining to TBI management, with any necessary changes, to CoTCCC at February 2012 meeting/Dr. Otten.

h. Response Memoranda from Dr. Woodson Regarding Tactical Evacuation and Tranexamic Acid

Discussion:

Dr. Butler initiated a discussion regarding the response memoranda from the ASD(HA) which conveyed that the TACEVAC and TXA recommendations from the Board would not be forwarded for action. Dr. Butler stated that both the Air Force and Navy have indicated that recommendations approved by the DHB and posted on the MHS Web site would be implemented. CDR William Padgett, Director of Preventive Medicine, Headquarters, U.S. Marine Corps, indicated that the Marine Corps may not support the use of TXA in theater, and would not implement this change through the Marine Corps regardless of whether it is posted on the MHS Web site and approved by the DHB. He noted that the recent recommended amendments to the TCCC Guidelines would be thoroughly reviewed by Marine Corps logistics staff prior to implementation.

Dr. Jenkins stated that the DHB President, Co-Vice Presidents, and other Board members agree that dialogue should be improved between the Board and the ASD(HA) and that a meeting to this end might be more productive than additional exchanges of memos. Dr Champion suggested that the CoTCCC provide a response memorandum indicating that the CoTCCC reviewed its recommendation and declined to revise it. Dr. Jenkins suggested that in 90 days, when the MATTERS-2 study would be complete, the CoTCCC would have more comprehensive data pertaining to TXA that could be presented to the ASD(HA). He added that he had already requested that COL Rasmussen conduct a subgroup analysis of U.S. casualty data for the CoTCCC.

With regard to the TACEVAC recommendation, Dr. Gandy stated that the 39-minute average evacuation time cited by the ASD(HA) could easily be lengthened by many factors to include wind and other weather conditions, or active fire where the casualty is located. Members felt that the TCCC Guidelines are written for all theaters and situations, and therefore must be generalized rather than based on an average evacuation time in one theater. Dr. Jenkins commented that the Board and its leadership felt that the Board should respond to Dr. Woodson, and that Dr. Dickey had asked Dr. Jenkins to develop a course of action. He stated that he would likely work with the Board leadership and Executive leadership to schedule a meeting, either via telephone or in-person, with Dr. Woodson, to discuss the concerns about these recommendations. Dr. Butler suggested that "talking points" for the meeting and a response memorandum should be drafted indicating that TXA should be available to build experience regarding its use and to enable data collection.

Dr. Butler noted TXA administration, like all TCCC recommendations, would need to be considered for the appropriate provider level in the TCCC Skill Sets matrix. He suggested that the CoTCCC consider revising the TCCC Guidelines in accordance with the ASD(HA) response memorandum, stating that TXA may be administered by Special Operations Forces, but not by conventional forces. COL Hachey suggested that the CoTCCC obtain additional information about evacuation times, since the only data that the ASD(HA) indicated was the 39-minute average response time. COL Eastridge stated that he had additional data regarding evacuation times which he could provide to the CoTCCC. Dr. Butler noted that the evacuation time in the Battle of Mogadishu was 15 hours for most of the casualties, and requested that members provide any data on evacuation times from previous theaters, as well.

Action/POC:

1. Obtain and review U.S. casualty subgroup analysis of MATTERS-2 study from COL Rasmussen/Dr. Jenkins.

2. Provide USAISR data regarding evacuation times/COL Eastridge.

3. Provide documentation of evacuation times in previous theaters to Dr. Butler/CoTCCC members.

i. TCCC Skill Sets by Provider Level

Discussion:

The members agreed that this issue should be tabled for further discussion at the February 2012 meeting.

Action/POC:

1. Examine optimal provider levels for TCCC Skill Sets prior to February 2012 meeting/CoTCCC members.

2. Ensure sufficient time is allotted on the agenda for the TCCC Skill Sets discussion at the CoTCCC February 2012 meeting/Dr. Butler.

j. Additional Business

Discussion:

Dr. Butler reiterated that Dr. Giebner would amend the TCCC curriculum posted on the MHS Web site to reflect recently approved TCCC Guideline recommendations regarding the Combat Ready Clamp™ and needle decompression, once his contract is renewed.

Dr. Champion proposed that the CoTCCC endorse a recommendation that would urge the Secretary of Defense to preferentially maintain resource levels for current combat casualty care readiness research as essential DoD core competencies and priorities. He stated that there may be significant budget cuts in the future, especially with the drawdown of troops in Afghanistan and Iraq, and such a statement to the ASD(HA) may help protect combat casualty care research. One member noted that much of the funding allocated in previous years has resulted in earmarked funds, rather than usable products. LTC Mabry indicated that to date, no funding had been secured for TACEVAC improvements. Dr. Bagian indicated that such a statement would be beyond the scope of CoTCCC's charge, and that the CoTCCC should request concrete products, rather than funding. Dr. Champion responded that the proposed recommendation is a request that combat casualty care not be cut to the extent that other medical research topics that are being duplicated in other agencies (such as infectious disease research) would be cut. When asked, Dr Champion could not list any of the projects included in the combat casualty care research portfolio nor could he describe precisely which project were in danger of being eliminated or any known products that have benefited combat casualty care. The members then voted on the proposal; 36 members voted in favor; five voted against the motion, and one member abstained from the vote.

COL (Ret.) Anders stated that he felt that the reorganization of the TCCC Skill Sets by provider level was essential, and should be made a prioritized agenda item for the forthcoming CoTCCC meeting. Following, Dr. Butler adjourned the meeting.

Action/POC: Forward CoTCCC recommendation regarding the sustainment of funding for combat casualty care and readiness training research to Trauma and Injury Subcommittee/Dr. Butler.

4. NEXT MEETING

The next meeting of the DHB Trauma and Injury Subcommittee's Committee on Tactical Combat Casualty Care is scheduled for February 7-8, 2012 at the Wyndham Westshore in Tampa, Florida. The following meeting is tentatively scheduled for May 1-2, 2012 in New Orleans, Louisiana.

ATTACHMENTS:

A. Guest Attendees

B. Letter from Honorable Togo West, Jr.

C. Letter from VADM (Ret.) Richard Carmona, M.D.

ATTACHMENT A: CoTCCC Meeting Additional Guests

November 15, 2011:

DHB Members

Dr. George Anderson
Dr. M. Ross Bullock
Rev Robert Certain
RADM Peter Delany
Dr. Nancy Dickey, DHB President
Dr. Eve Higginbotham

Additional Guests

Professor Sylvain Ausset, Anesthesiologist, Val de Grace Military Medical Center
Dr. David Baer, U.S. Army Institute of Surgical Research (USAISR)
CAPT Linda Beltra, U.S. Navy Bureau of Medicine and Surgery
Col Jeff Bailey, Joint Trauma System, San Antonio, Texas
Mr. Nick Beeson, HQ FORLOMD, Australia
SGM F. Bowling, U.S. Army Special Operations Command
Mr. Tyson Brunstetter, Chief, Joint Medical Test and Evaluation, Defense Medical Materiel Program Office (DMMPO)
Ms. Heather Casey, Action Officer, U.S. Marine Corps Training and Education Command
Mr. Bill Cauley, GEAA
Kao Bin Choi, Regimental Surgeon, 75th Ranger Regiment
Mr. Rafael Cohen, Physician Assistant, Federal Bureau of Investigation (FBI)
Mr. Victor Convertino, Program Area Manager, TCCC Research, USAISR
CDR Martha Cutshall
MSgt David Dahl
LT Brian Drzewiecki, FMBT-West, CP, CA
Dr. William Fabbri, Medical Officer, FBI
Lt Col Raymond Fang, C-STARS Baltimore, U.S. Air Force
Dr. Fabian Fernandez
LTC Robert Gerhardt, USAISR
LTC Ben Hatano, Medical LNO, JGSDF, Office of the Surgeon General (OTSG), U.S. Army
Ms. Ginger Hendee, Force Health Protection and Readiness
COL Annette Hildabrand, Deputy Director, DoD Clinical Use Programs, Office of the Secretary of Defense/ Assistant Secretary of Defense (Research and Engineering) (OSD/ASD R&E)
Mark Jacques, 160th Special Operations Aviation Regiment (SOAR (A)) Regiment Surgeon
MAJ Keary Johnson, DMMPO
COL Andy Jose, BLO (MED), OTSG
Mr. Kevin Joyner, Program Analyst, Research and Development, Family of Field Medical Equipment, Marine Corps Systems Command
LTC Shawn Kane, USASOC
Mr. Win Kerr, SWMG
Robert Kieley, 160th SOAR (A) Senior Medic Regiment
CPT Carl Kusbit, 82nd Airborne Division, Surgeons' Office, Fort Bragg
Steve Lemon, Force Health Protection and Readiness, Office of the Assistant Secretary of Defense (Health Affairs)
COL Christian Leonce, French Medical Liaison Officer, OTSG

Mr. Jeff Luciano, Natick Soldier System Center
Mr. Mark Lueder, TCCC Coordinator, Pre-Hospital Trauma Life Support
MAJ Chris Maani, Chief of Anesthesia, USAISR Burn Center, Brooke Army Medical Center
Dr. Perry Malcolm, OSD/ASD (R&E)/RFD
Dr. Donald Marion, Defense Veterans' Brain Injury Center, Defense Centers of Excellence
Dr. Christophe Martinaud, Percy Military Medical Center, French Military Blood Institute
Col (Ret.) Robert Mazzoli, Vision Center of Excellence, Madigan Army Medical Center
LCDR Anne McKeague, Naval Medical Research Unit, San Antonio, Fort Sam Houston, TX
Major Tony Meriano, CANSOFCOM, Canadian Forces
Mr. John Miles, Field Medical Training Battalion East, Camp Lejeune, NC
Cleris Mitchell, JRNL
Mr. Jeff Mott, Tactical Combat Medical Course
COL Karen O'Brien, Deputy Commander of Clinical Services, Madigan Army Medical Center
CDR William Padgett, Director of Preventive Medicine, Headquarters, U.S. Marine Corps
CDR Steven Parks, Medical Programs Officer, Marine Corps Training and Education Command
COL Todd Rasmussen, Deputy Commander, USAISR
Col Katherine Richardson
LTC Kenan Riley, U.S. Air Force Special Operations Command
Maj Brandi Ritter, Research, Development and Acquisition Fellowship Director, Defense Medical Materiel Program Office
Dr. Michael Rotondo, Professor and Chairman, Department of Surgery, Brody School of Medicine; Chair, Committee on Trauma, American College of Surgeons
COL Colleen Shull, Chief of Staff, DMMPO
Col Stacy Shackelford, C-STARS Baltimore, USAF
MAJ Greg Siebert
Mr. Craig Silderton, USAF Reserves
CAPT Robert Sorenson, Force Surgeon, U.S. Marine Corps Forces Command
Mary Ann Spott, Joint Trauma System, USAISR
COL Steven Swann, Command Surgeon, U.S. Special Operations Command
HMC Jeremy Torrisi, Marine Corps Special Operations Command School
SOCM Steve Viola, Command Master Chief, Naval Special Warfare Advanced Training Command
Mr. David Wade, FBI
Mr. Scott Williams, Natick Soldier Center
Dr. Ann Yoshihashi, Medical Analyst, Naval Operational Medical Lessons Learned Center, Navy Operational Medicine Institute

November 16, 2011:

CAPT Linda Beltra, U.S. Navy Bureau of Medicine and Surgery
Mr. Bill Cauley, GEAA
Mr. Rafael Cohen, Physician Assistant, FBI
CDR Martha Cutshall, Headquarters, U.S. Marine Corps
CDR William Padgett, Director of Preventive Medicine, Headquarters, U.S. Marine Corps
Mr. Glenn Riccio, GEAA
COL Steven Swann, Command Surgeon, U.S. Special Operations Command
HMC Jeremy Torrisi, Marine Corps Special Operations Command School

ATTACHMENT B: Letter from Hon. Togo West, Jr.

Frank:

Certainly. You and the Committee have done a tremendous job.

TDW, Jr.

----- Original Message -----

From: Frank Butler

To: Togo D. West, Jr.

Cc: Janice Joyner ; Jay Johannigman ; Sara Jacobs ; Danielle Davis ; Steve Giebner 3

Sent: Friday, October 07, 2011 9:07 AM

Subject: Re: CoTCCC Tenth Anniversary Dinner - 15 November 2011

Secretary West -

Very sorry that you will not be able to join us for dinner, but certainly understand the demands of your busy schedule and appreciate your letting us know.

Thanks also for your kind and eloquent words of congratulations to the group. May I ask your permission to share these words with the group at the dinner?

V/R -

Frank

From: "Togo D. West, Jr." <twest@tlileaders.com>

To: fkb064@yahoo.com

Cc: Janice Joyner <jjoyner@tlileaders.com>

Sent: Thursday, October 6, 2011 2:17 PM

Subject: Fw: CoTCCC Tenth Anniversary Dinner - 15 November 2011

Dr. Butler:

Unfortunately, a prior commitment prevents me from attending the 10th Anniversary Dinner of the Committee on Tactical Combat Casualty Care on November 15, 2011. Now, as we continue to be engaged in two combat theaters abroad, is a most appropriate time for you to acknowledge at your

Banquet and Awards Ceremony the dramatic improvements in trauma care provided to our men and women in uniform who are injured on the battlefield. The reports of lives saved and the improvements in lowering the preventable death rates among battle casualties are reminders of just how far the TCCC Guidelines, training programs, and leadership have moved our services towards the improved application of life saving techniques for those who serve.

I am grateful for your invitation to your awards dinner; I regret that I cannot attend; I commend you, your colleagues and all who have worked in this effort on your extraordinary results, and your prospects for continued success in safeguarding the lives of those who safeguard the Nation.

TDW, Jr.

RICHARD H. CARMONA, M.D., M.P.H., FACS
17th Surgeon General of the United States (2002-2006)

November 14, 2011

CAPT (Ret.) Frank Butler
Chairman
Tactical Combat Casualty Care Committee
Department of Defense Health Board

Dear Frank and Committee on Tactical Combat Casualty Care Colleagues:

It is with great regret that I am unable to be with you tonight due to a long standing commitment.

Tonight is not only an opportunity for us to celebrate the extraordinary advances in combat casualty care that the Committee on Tactical Combat Casualty Care has led, but also a chance for our warriors and a grateful nation to appreciate the unwavering selfless service and immense contributions of the CoTCCC.

Historically our nation's health and emergency care infrastructure improves significantly after every war. Today we have the finest trauma and emergency medical systems in the world, largely due to the innovative best practices translated from the battlefields to our communities. However, in the past this translation process of evolving scientific intellectual property has sometimes taken decades before it has benefitted our communities. Through the dedication, commitment, professionalism and perseverance of the CoTCCC, you have acted as the scientific vetting agent and accelerator of best practices "downrange" and back to CONUS.

The result has been a decrease in the time it takes to incorporate best practices, resulting in an unprecedented reduction in morbidity and mortality for our warriors downrange. And now, once again, our nation and the world will benefit from our lessons learned but this time in a much shorter pipeline from field experience to common utilization.

I would venture to say that the CoTCCC has been one of the greatest contributions to combat casualty care in history.

Thank you all for your extraordinary service and contributions. I am proud to know and work with all of you.

Most Sincerely,

Richard Carmona, M.D., M.P.H., FACS
17th Surgeon General of the United States
Vice President, Defense Health Board

cc: Hon. Jonathan Woodson, ASDHA
Nancy Dickey, President, DHB
GEN (Ret.) Dick Myers, Vice President, DHB

Vice Chairman
Canyon Ranch

Chief Executive Officer
Canyon Ranch Health

President
Canyon Ranch Institute

Distinguished Professor
Zuckerman College of Public Health
University of Arizona