

**COSCCC Meeting
15-16 November 2017
San Antonio, TX**

Meeting Minutes

7 Dec 2017

Mr. Dominick Sestito

15 Nov 2017

1). Admin Remarks and Introductions (Col Stacy Shackelford): Col Shackelford, the Chair of the Committee on Surgical Combat Casualty Care (CoSCCC), convened the meeting and welcomed meeting participants. Col Shackelford briefly reviewed the meeting's agenda. Mr. Dominick Sestito discussed transportation and logistical information for participants.

2). Deployed Surgeon Presentation (Maj Marc Northern): Maj Northern discussed his experience as a deployed surgeon at SOST Black Team OIR.

Maj Northern outlined what is SOST Team. (2 EM, Surg, Surg Tech, CCN/ERN, Anesthesia, Augmented by 1CRNA, 1Surg, 2-4 medics). Mission was to serve as a forward CCP/Surgical Capability with 1 trauma bay and 3 resuscitation beds, 1OR with 2 beds. Diagnostic capabilities- VScan dual ultrasound probe, Doppler probe, Glucometer.

Medical decision making was based on: Damage Control Only, Stabilize and transport

Limitations

- Blood products (and blood storage)
- IV Fluids
- Power/Electricity
- Monitored holding capability

MEDROEs

Deployed 120 days and saw 1011 total patients; 866 Trauma patients, 8 REBOA's. Participated in 31 MASCAL events, infused 1370 units of blood products, and conducted 53 walking blood bank drives.

Patients:	Total Surgeries:
82% penetrating trauma	109 laparotomies
20% blunt trauma	26 thoracotomies
33% civilian	27 vascular shunts
14% pediatric	7 neck explorations
1.1% major burns (>20% TBSA)	28 pediatric cases
3 military working dog evaluations	63 amputations
	13 ex-fixes
	22 urologic cases
	8 REBOAs

Challenges faced: Patient warming, Blood refrigeration, Blood warming, Power/Generators, Class VIII/resupply. Blood Products- Limitation to forward facilities, supply timeline, low-titer O, no ability to store, unable to meet CPG guidelines.

Recommendations: Skills that every deployed general surgeon must know

- Rapid vascular exposure, shunts
- Damage control thoracic surgery
- External fixation of long bones (upper and lower extremities)
- Basics of damage control neurosurgery
- REBOA
- Pediatrics

3). Deployed Surgeon Presentation (MAJ DeBarros): Maj DeBarros facilitated a Forward Surgical Team (FST) with 6 PROFIS and 14 organic personnel conducted split FST operations from February to November 2017 initially in two countries in support of Operation Inherent Resolve.

Primary mission: provide urgent medical and damage control surgery to U.S and coalition forces partners.

Secondary mission: provide urgent medical and damage control surgery to local national forces vetted by U.S. forces.

Experience on the team was varied:

- General Surgeons: one with 5 prior deployments, one with 1 prior low volume deployment and one recent graduate with no prior deployments.
- Orthopedic Surgeon: No prior deployment.
- CRNAs: one recent graduate, one with 20+ years' experience. No prior deployments.
- Only one home MTF is level II

Pre-deployment Preparation:

- The organic personnel attended ATTC at Ryder Medical Center with 2 of total PROFIS personnel assigned (1 CRNA, 1/8 surgeons).
- Clinical practice guidelines
- E-textbooks
- Videos
- Personal experience/advice from colleagues.

Challenges: Command and Control! No clear communication lines, too many chiefs. Wholly dependent on the units that we supported for all logistics and security.

- No organic communication equipment. Patient hand-off on yellow sticky notes. Rooftop security would notify us when the ambulance was arriving if at night but sometimes not at all.
- Heat was too much for Refer/Freezers to maintain cooling...equipment stress/breaks.
- Elongated Supply chain – received damaged or useless items, 1-2 month transit time, personnel could order from Amazon.com for personal items and receive 2-3 weeks...Blood/Supplies taking 1-2 months...UNSAT!

Lessons Learned:

- Survivable injuries become non-survivable if unable to perform adequate resuscitation.
- Difficult decision to stop active resuscitation due to depletion of supplies and no way to expedite re-supply.
- Team De-Briefs after difficult cases are valuable.
- Walking blood bank for local nationals started to combat resource-poor environment.
- Avoid neurosurgical procedures in austere environment unless stable and adequate communication with NSG to discuss case.
- Current craniotomy sets and training in the FST are inadequate.

- Without imaging (CT or X-ray) recommend against neurosurgical procedures and favor medical management and expeditious transport to higher level of care.
- No current recommendations in management of local national patients not eligible for higher level of care at US MTF.
- Small number of patients is MASCAL event for split FST operations.
- Lack of MEDEVAC, robust logistics makes caring for multiple critically-ill patients difficult in austere split FST operations.
- Hard structures preferable in far forward locations.
- No clear data to support split FST or CCP mission.

To assume that we are on the same level as the JMAU/JSOC teams is a fallacy. These teams are hand-selected and train together throughout the year. This does not happen with the GHST/DCRT set-up or split FST. You get what the tasker and PROFIS provides.

The expectation of the line commanders is that these teams provide the same level of expertise, care and capabilities as a full FST with the logistical and security support of a BSB or at minimum a medical support company. These teams are Potemkin Villages dreamed up by medical planners with no surgical experience to meet the Golden Hour standard in some very difficult, austere environments.

4). Vice Commander, U.S. Special Operations Command (Lt. Gen Howell): General Howell is responsible for planning, coordinating and executing actions with the Office of the Secretary of Defense, the Joint Staff, the Services and other government agencies in the National Capital Region on behalf of the Commander USSOCOM.

Not all SOF missions are going to be supported by SOF surgical teams.

Most missions are going to be supported by conventional FST or similar level units.

Current Problems:

- War is not over
- Fewer combat experienced surgeons
- Less experienced surgeons deploying
- No large volume platform for in-theater training
- Each service has different approach

How SOCOM can help:

- CSU's must own the surgical teams to ensure readiness
- Embedded in civilian trauma centers
- Demand Medical Proficiency Training (MPT) for all SOF medical providers/nurses into civilian trauma centers
- Increase time in service/age waivers for SOF medics to become SOF PA's

Conclusion

- Maintaining surgical support to SOF requires getting the right people to the right place
 - Cannot let the pool of surgeons able to do the job disappear
 - DoD needs to ensure that we train military surgeons with broad capabilities
- CoSCCC needs to leverage partnerships with foreign nations (French). Need to ensure SOF participates in Registry to improve Data Out. Integrate Training. Lt. Gen concerned DHA will try and take \$\$ back instead of contributing towards combat capabilities if we do not address these issues in a formal way soon.

5). Austere Neurosurgery (CDR Randy Bell): CDR Bell discussed Proposed CPG: Non-neurosurgeons performing cranial procedures far forward.

- Gold standard for performance of cranial procedures in any environment completion by a neurosurgeon
- In theater critical care air transport is more limited than in the past.
- There are not enough cases in theater to support more than 2 neurosurgeons, and then only if the humanitarian mission is allowed to take precedence.
- Training non-neurosurgeons to perform limited cranial procedures (decompression) is a controversial but potentially viable solution.
- Precedent for this practice exists with guidance from the International Committee of the Red Cross.

Problems:

- Traditionally not supported by the American Association of Neurological Surgeons or Congress of Neurosurgeons
- General Surgeons formerly rotated on neurosurgery during training. Now no exposure.
- Neurosurgeons need to provide training and mentorship.
- Role II's are not equipped to perform surgery like this
 - Suboptimal surgical tools
 - No or limited radiographic image

Applicability:

This clinical practice guideline applies to United States military non-neurosurgeons in a forward deployed location with surgical capability (Role II surgical teams that meet capability requirements) outside of the Continental United States.

Recommended qualifications for non-neurosurgeons to perform cranial procedures with very specific clinical indications in austere environments include:

- Board certified/eligible general or head and neck surgeon
- Documented completion of a minimum of 10 cranial procedures supervised by a neurosurgeon. A minimum of 1 of these procedures must occur within 1 year of scheduled deployment.*
- Completed a cranial simulator course within 3 months of deployment run by a board certified/board eligible neurosurgeon (i.e. Emergency War Surgery Course or Asset+).
- In cases where a general surgeon has not met the recommended training, the risk of neurosurgical intervention may outweigh the benefit and medical management may be preferred.

Facility Preparations:

- Emergency cranial pack that includes an electric drill with cranial perforator bit and matchstick or cutting ball, a Leksell Rongeur, Penfield instruments, bipolar cautery, Dural substitutes, hemostatic agents (i.e. gel foam, surgical, etc.). A gigli saw and Hudson drill may be included as back up should the electric drill fail during the procedure.
- Non-invasive measures of intracranial injury.*
- Critical care capabilities
- Tele-conference capability (video-teleconference capability preferred).

Procedural Basis:

Closed head injury: If no CT scan is available, an accurate neurological examination must be obtained for the purposes of localizing the lesion. Consider a skull xray to augment localization if available. Proper positioning of the patient is very important. Avoid any compression of the neck to assure unhindered jugular venous outflow. The head should be positioned slightly higher than the chest. Rotate the head 30-40° off midline such that the side being operated on is highest. Mark the midline of the scalp, as well as the location of anticipated burr hole and craniotomy incisions, prior to draping the head. Once localized, exploratory burr holes will be made over the frontal, temporal and parietal convexities using electric drill for the purposes of identifying a hematoma. If necessary, the dura can be opened carefully through the burr hole following cauterization if blood products are subdural. If evidence of epidural or subdural bleeding or high intracranial pressure is encountered, a craniectomy should be performed. Burr holes alone are unlikely to be helpful in the setting of severe TBI. Once the decision to proceed with craniectomy is made, the dura must be carefully separated from the inner table of the skull (Penfield 1-3 instruments) and the burr holes connected with the electric drill using either a side cutting bit or a "matchstick" bit. An appropriately sized craniectomy is usually at least 15cm long in the sagittal plane and 12cm in height in the coronal

plane, however this may not be advisable in the far-forward setting. Take care to stay off midline in order to avoid injury to the superior sagittal sinus. If the hematoma is epidural, it must be evacuated and the bleeding source cauterized. If subdural, the dura must be opened, the hematoma evacuated, and if visible, the bleeding source cauterized. Do not replace the bone. If not visible, do not search for a bleeding source. If subdural hematoma, do not close the dura. In all circumstances, the scalp must be closed. If the brain herniates rapidly out after dural opening, close the scalp immediately.

Penetrating head injury: Penetrating brain injury is one of the most challenging indications for cranial procedures performed by neurosurgeons. There is often deep and uncontrollable bleeding that may not be evident on the cortical surface. It is not recommended that a non-neurosurgeon intervene surgically without a CT scan available. If cranial contents are herniated from either the entry or exit wound, allow this to continue. Do not close the wound. Adequately resuscitate as necessary, and transport immediately. If not possible, recognize that intervention in this case may be futile. DO NOT proceed without a neurosurgeon to guide. The purpose of this procedure will be to remove bone, open dura control bleeding and close the skin rapidly as outlined above.

6). JMAU Way Forward (COL Robert Mabry): COL Mabry discussed Ideal surgical metrics to define an “Expert”

Per year:

> 250 major surgical cases

>50 major trauma cases

>50 laparotomies

>25 for trauma (not including take backs)

>5-10 vascular exposures / shunts

>5-10 thoracotomies

Other experiential considerations:

Neurosurgical (craniotomy) and neuro critical care exposure

External fixator exposure

REBOA and endovascular techniques

Robust Ultrasound

Critical Care Transport

Burn and pediatric

Commander Intent: Develop the most highly qualified and expeditionary damage control surgery, resuscitation, and critical care transport professionals in the world; Monitor all teams to determine suitability; Achieve full system implementation NLT 2020, with zero degradation in current support requirements or relationships.

2017 NDAA Section 708/709 and DoDI discussed.

Commander’s Vision:

“My goal is to develop the most highly qualified and expeditionary damage control surgery, resuscitation, and critical care transport professionals in the world through assignment to JSOC and by leveraging intensive involvement at civilian trauma centers. We will create a supporting campaign plan that cultivates cultural change within the health service enterprise and ultimately shapes our senior leaders and the future environment. We will have the initial two pilot teams in place NLT 1 July 2018, implement an additional two teams each six months thereafter, monitor all teams to determine suitability, and achieve full system implementation NLT 2020. All aspects of this operation will be achieved with zero degradation in current support requirements or relationships.”

Summary: Surgical team providers (surgeons, emergency physicians and CRNAs) are currently assigned to military treatment facilities (MTFs) and attached as borrowed military manpower (BMM)

Surgical team providers assigned to MTFs lack the regular exposure to complex trauma cases needed to develop and sustain readiness in key individual and collective JMETL tasks

Bottom line: READINESS. Our customers deserve the most capable teams we can give them.

We will account for these positions. It will take time for service force structure to grow and compensate for the initial loss, but the force will realize growth at end-state

In return, we will give the services the very best trained providers in the military and grow their future medical leaders

7). REBOA Theater Update Clinical Training Program (COL Matt Martin): COL Martin discussed Limited options for early control of truncal hemorrhage. Majority of initial care provided at Role 1 or Role 2 level in an austere environment, with limited resources.

PRO for REBOA:

- Need far-forward solutions for NCTH!!!
- Weight and cube efficient, portable
- Minimally invasive, Effective
- Additional benefits to military environment
 - minimal equipment
 - blood sparing
 - transport stabilization
 - lack of IR support

CON for REBOA:

- ZERO controlled evidence, existing literature biased
- Requires excellent judgment!
- Lack of robust support in the forward environment
- Introduced ad-hoc and no monitoring (ASTs)
- ZERO centralized data collection
- Case reports with NO follow-up
 - outcome measure "they survived to the door"
- Requires specialized training, maint of skills?

REBOA defined: Small catheter with an inflatable balloon near the tip, which is Introduced into femoral artery, then advanced into the desired zone of the aorta, Inflated to occlude all arterial flow distal to that point.

Who can place a REBOA: Qualified physician who has completed the required TF MED 21 training pathway for OIR.

Requirements discussed: Training presentation, Video set (4), JTS CPG, Hands-on training simulator, post-test.

REBOA:

- Background presentation
- Patient Selection
- Contraindications
- Technique
 - Selecting the zone
 - Confirming placement
 - Xray
 - Secure catheter
 - Duration for inflation
 - Rapid movement
 - Deflation
 - Complications
 - Certification

Local REBOA Champion:

Each unit or element with REBOA capability will identify at least one "REBOA champion"

Responsibilities include:

- providing familiarization training to entire team
- ensuring proper storage and utilization
- coordinating re-order/re-supply as needed
- left seat/right seat training of replacement
- submission of data on any REBOA use per JTS CPG

Current Issues and Concerns:

- Need data, need data, need data, need data!
- Who should be trained and CERTIFIED?
 - gen surg and EM
 - ?others
- Identification of all eligible providers
- Transition to pre-deployment?
- Maint of skills?
- Military specific REBOA issues - ?transport

8). Torso Hemorrhage (Dr. John Holcomb): Dr. Holcomb disclosed many financial conflicts, discussed Emergent Laparotomy. Reiterated where and how soldiers are dying in combat, death on the battlefield, Golden Hour and other publications. Stating: 5 recent prospective resuscitation trauma studies (n = 4064 patients) time to hemorrhagic death was within 3 hours, despite differences in 30 day mortality. Trauma deaths from hemorrhage occur rapidly and in a consistent pattern.

Holcomb States: "In my mind, the overriding lesson learned from 16 years of war is that timely, effective interventions must occur as soon as possible after injury in order to improve outcomes. DCR significantly improve outcomes in severely injured bleeding patients.

After a review of the best available evidence, we recommend the use of a MT/DCR protocol in hospitals that manage such patients and recommend that the protocol target a high ratio of PLAS and PLT to RBC.

This is best achieved by transfusing equal amounts of RBC, PLAS, and PLT during the early, empiric phase of resuscitation.

The resuscitation fluids of choice for casualties in hemorrhagic shock are (in priority order):

1. whole blood
2. plasma, RBCs and platelets in 1:1:1 ratio
3. plasma and RBCs in 1:1 ratio
4. plasma alone
5. RBCs alone
6. Hextend
7. crystalloid (lactated Ringer's or Plasma-Lyte)

Earlier time to hemostasis was independently associated with reduced 30-day mortality in bleeding trauma patients.

Discussion about REBOA, ResQFoam, AAJT, Pre-hospital Truncal Hem Control at the scene + WB resuscitation might improve outcomes!

Conclusion:

- Time to hemorrhagic death happens at a consistent rate
- Death after trauma laparotomy hasn't changed in 20 yrs.

- 72 - 90% of abdominal bleeding sites are above the aortic bifurcation
- Earlier Hemorrhage control should improve outcomes
 - ED vs PH
- Must consider triage, personnel expertise, risks and benefits of proposed interventions

9). Surgical Workload R2/JTS update (CAPT Zsolt Stockinger): CAPT Stockinger outlined the difference between busy people and productive people. Outlined deliverables produced by each committee, promoted more work output. Emphasis on trauma sustainment training in the U.S. military. There are many efforts underway to resolve this. Despite all of these efforts to plan trauma (surgical) sustainment training....

NO ONE HAD REALLY DEFINED WHAT SURGERY WE ACTUALLY DO DOWNRANGE!!

Comparison made between deployed surgeon and MTF practice.

“42% of incoming fellows are not ready to perform 30 minutes of a major procedure independently” – Ann Surg 2013; 258:440-449

CAPT Stockinger posed the questions based on statistical numbers showing birth rates and appendectomy’s leading surgical procedures in MTF if the MTF can even be part of the solution to train surgeons.

Recommendations:

1. Make MTFs into trauma centers
2. Embed SMs part- or fulltime into civilian centers

However:

- At only 18% of Level I trauma centers do trauma surgeons perform “the full complement of thoracic, vascular, and abdominal cases.”
- At only 6% of Level II centers and 4% of Level III centers do “trauma surgeons [manage] the full range of injuries.
- Trauma surgeons do burr holes at 1.5%, and open fracture washout at 0.6%. - J Trauma (2008) 64:955-965

–“The presence of other learners must not interfere with the appointed residents’ education.” – ACGME Common Program Requirements

-Level 1 trauma centers are in the business of receiving, not stabilizing and sending, trauma patients

10). LITES (Dr. Shelley Jorgensen): Dr. Jorgensen discussed Linking Investigation in Trauma & Emergency Services Clinical Research Network (LITES) Overview pertaining to research protocols. She outlined a history of the trauma clinical research program and the creation of LITES.

-The Committee acknowledges that the last 15 years of war in Afghanistan and Iraq have enabled the U.S. military to learn vital lessons in combat casualty care.

-Congress supports another \$10M appropriation and encourages the Assistant Secretary of Defense (Health Affairs), the Director of the Defense Health Agency, and the Commander of the U.S. Army Institute of Surgical Research to work with other Federal agencies focused on tactical combat casualty care [TCCC].

LITES purpose:

- To create a research network of US trauma systems and centers with the capability to conduct prospective, multicenter, injury care and outcomes research of relevance to the Department of Defense (DoD).
- To establish a contractual mechanism for the LITES Network to conduct Government directed research.

- To answer questions aimed at narrowing high priority gaps in care of the severely injured.
- To resolve high priority gaps and provide solutions (knowledge and materiel) to the DoD requirements-driven research management process.
- The LITES Network is integral to lessons learned from the recent wars and the creation of innovative medical technology for future, more complex operational environments.

Federal Stakeholders:

Task Order Submission and Conflicts of Interest

1. Consult with your organization's chain of command on military relevant gaps and priorities that could be utilized via the LITES Network
2. Fill out the Statement of Objectives (SOO) .pdf document
3. Send the SOO to the COR who will submit to the Expert Panel for review
4. You may be asked to present your task order submission at the Quarterly Expert Panel meeting
5. Due to the nature of the Government-driven IDIQ contract mechanism and potential conflicts of interest (COI), do not disclose Task Order submission information to non-federal agencies/organizations
6. A non-disclosure agreement (NDA) will be required prior to submission of the SOO

16 Nov 2017

1). Administrative Remarks (Col Stacy Shackelford): Col Shackelford, the Chair of the Committee on Surgical Combat Casualty Care (CoSCCC), convened the meeting. Col Shackelford briefly reviewed the meeting's agenda for the day.

2). Senior Leadership Remarks (MG Brian Lein): MG Lein opened by stating NDMS used BAMC to mobilize.

Blue print proposed: MTF → training facility (integrated)

1. KSA – CoSCCC needs to tell them what's needed within Trauma Training Center.
2. Recruit and Retain trained Trauma Surgeons
3. Define what does "surgery" mean and how to define it in the future (sustainment)

COL Mabry asks: "what do you think is the one thing we can leverage?"

1. Codify ACS to get into Civilian hospitals to receive the level of trauma training needed to go
2. Eliminate Tricare Prime and open the doors to all.

MG: Define what it means to be "ready"...define surgical readiness.

3). Deployed Surgeon's Presentation (LT Miller/Hamrick): Discussed MASCAL at sea USS BATAAN deployed in the 5th Fleet during 2017 as part of Operation Inherent Resolve; Six personnel transported by MV-22 to the USS BATAAN following a helicopter crash.

6 Patients with varying degrees of injuries. (Pelvic fracture, limb fracture, hypotension, facial laceration, thoracotomy, aortic cross-clamp, CVC, spine injuries)

Patients Transported via 2x MV-22

Tail-To-Tail with AF CCAT On Ground

Short Flight From Ship-To-Shore, < 15mins

Unreliable Impact Ventilators; Patients Hand Ventilated

USS BATAAN Landing Helicopter Dock (LHD) -5

Amphibious Assault Ship
Casualty-Receiving Ship
4 Operating Rooms
15-Bed ICU
45-Bed Medical Ward
Lab and X-ray
Frozen Blood Bank
“Walking Blood Bank”
Can receive via Surface or Air
CRTS – Casualty Receiving and Treatment Ship
4 Dedicated ORs, 2 Ad Hoc ORs
-3x Surgeons (General, Bariatric, Trauma/Vascular)
-3x CRNAs
-5x OR Surgical Technicians
-1x OR Circulating Nurse

FST Embarked

1x General Surgeon

1x CRNA

2x OR Surgical Technicians

1x OR Circulating Nurse

To fully utilize all ORs on the LHD Platform an 84 Person CRTS-Team would need to be embarked.

Frozen Blood Bank

-400 Units pRBCs

-50 Units FFP

-No Platelets

-No Apheresis Machine

Walking Blood Bank

130 Sailors are Pre-Screened

WBB Activated with Ship-Wide Announcement

Six Phlebotomy Stations Prepared (Dental)

Only Type-Specific FWB is Transfused, NOT Low-Titer O Negative FWB

Donor and Recipient Blood Types are Confirmed with Type-Specific Antisera Prior to Transfusion

4). Administrative Remarks (Col Stacy Shackelford): Col Shackelford reviewed Institutionalization of Evidence Based CCC

Year 1 Deliverables

Return on investment report.

Tri-service expert consensus statement on sustainment and readiness training requirements.

Review of existing practice guidelines, identification of gaps and needed changes.

Annual literature review and evidence updates for en route care and forward surgery.

Publication of Top 10 research priorities in en route care and forward surgery.

CoSCCC Goals:

Lead change in DoD trauma care delivery

Inform research

Prepare (train and educate)

Develop guidelines

Engage existing working groups, reduce duplication of efforts

Strategic messaging

DELIVERABLES

A review of proposed criteria for each subcommittee was outlined by Col Shackelford. Trauma Training Standards:

-Pre-deployment verification of procedural skills.

-Periodic assessment of knowledge, skills, and abilities aligned with a relevant curriculum.

-Development of a measurable "readiness" value of in-garrison practice

-Appropriate remediation when indicated focused on identified deficits.

-During the development period

-Surgeons attend the Emergency War Surgery course within 1 year prior to deployment, not more frequently than every 3 years.

-Non-surgeon clinicians attend a military trauma skills course within 1 year of deployment, not more frequently than every 3 years.

5). Whole Blood support (LTC Jason Corley): LTC Corley reviewed the efforts to supply Whole Blood for contingency support.

- Armed Services Blood Program Office memo 11 Apr 2016
- Requesting each Service Blood Program to be capable of producing low titer Group O WB NLT 1 Oct 2016
- Most donor centers are licensed for Whole Blood production, but no longer produce it
- Requires SOP and labeling updates
- Requires identification of a titer testing service

LTOWB production currently taking place in 18 places nation-wide, with testing centers in 7 of those locations.

Armed Services Blood Program Office (ASBPO) assigns Navy, Army and Air Force Blood Programs weekly blood production quotas. This quota does not address production for garrison MTF support

Example: LTOWB support to SAMMC (25 LTOWB units on shelf).

CENTCOM Focus-SOF Community/ Secondary Role 2 with no WBB/Role 2 and Role 3 with WBB.

- Current LTOWB Distribution
- 80-90 units per week to CENTCOM
- Working to increase to 100 units per week

AFRICOM • Army Donor Center at Landstuhl can produce LTOWB

- However, still formulating plan for distribution

LTOWB Production parameters:

- Titer level: <1:256 acceptable

Based on past military use of product

Established during WWII

- Civilian hospitals/donor centers using lower/more conservative titers
- O pos requirement only, no Rh neg
- CPD anticoagulant – 21 day exp.
- Moving to CPDA-1 – 35 day exp.

What is often the delay on producing product at donor centers?

- Titer testing services (key is TAT on results to maximize shelf life)
- What doesn't pass titer level must be processed into components in 72 hours
- Growing requirement for RBCs (CENTCOM and AFRICOM customers)
- Updating processes and procedures (takes time but not a major factor)

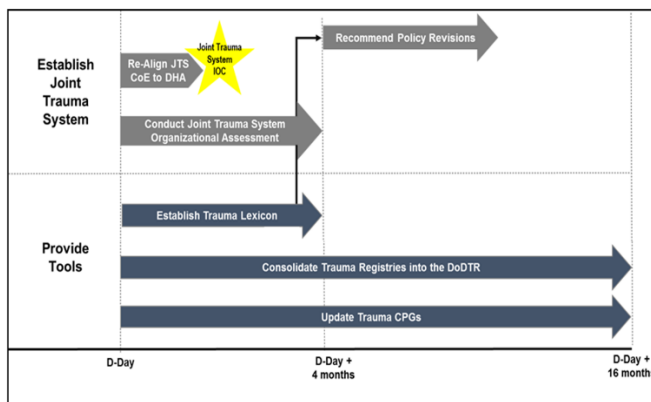
Pre-screen for WB collection discussed - Program initiated May 2015 with 75th Ranger Regiment - 2015-2016 expanded to HAAF and JBLM to cover all Ranger BNs.

If no LTOWB, how about 1:1:1

- 10 day Cold Stored Platelets available in CENTCOM
 - R3 – Craig/Bagram & TF Med/Baghdad
 - R2 –
 - No incubator/rotator requirements
 - Store at same temp as RBCs and liquid plasma
 - Picture of blood refrigerator – TF MED R3, 8 Nov 2017

6). NDAA Implementation Plan (Col John Mitchell): Col Mitchell discussed NDAA Reports: For Readiness-related Sections, developed by working groups led by a Service with the full participation of the Joint Staff, the other Services, the Office of the Assistant Secretary of Defense for Health Affairs, the Defense Health Agency, and other elements of the Department of Defense.

What is the true Foundation of a Ready Medical Force? Retention? KSAs?



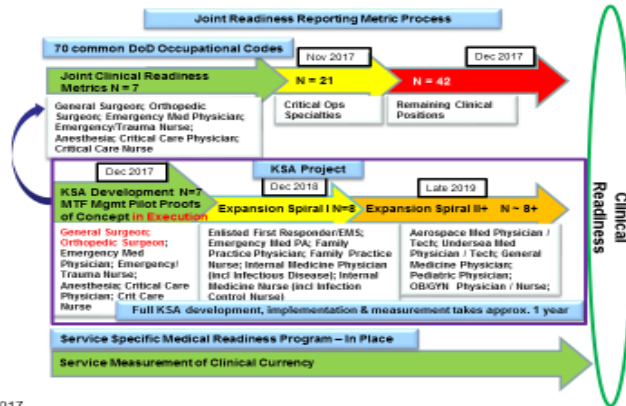
Insight Details for upcoming changes:

- Began doing policy, CPGs, Critical Pathways for DoD, VA, NIH
- ICU Director, EM & Surg Service Full-Time teammate > 12 yrs; Joint for 7 yrs; CCATT
- SGH/'DCCS' at a Med Ctr with full VA & Civ coop
- Medical Director for TRICARE, including Civ EM & surgical Quality Care; Joint
- Commander of 840 in Med Ctr; responsible for prehosp, EM, ICU, etc.; VA & Civ coop
- Command Surgeon, USCENTCOM SG-defined Afghanistan Trauma Czar 13 months; grew AFG prehosp & surg capabilities; visited MFSTs, FSTs, at remote locations; Joint
- DMRTI Commander for DASD(FHP&R) (now called HRP&O); ATLS instructor, intl Cas Care teaching; Joint
- Trauma Hospital (Joint, 12 mons, deployed) Commander (320->5) with Army+AF (prehosp, surgical teams) + AF EM + CCATT/Flight Surgeon missions; visited MFSTs, FSTs, CSHs, AE; managed hosp closure during direct hit blast while at work; Joint
- DIMO Director, intl Cas Care teaching; Joint
- USEUCOM SG: Trauma/PFC/MEDEVAC for Eastern Europe, Africa, NATO; MEDLOG, etc



UNCLASSIFIED

Joint Readiness Reporting Metric Process: Clinical Readiness



As of: 26 Oct 2017

8). Military Preventable Death (Dr. Judson Janak): Dr. Janak spoke on the studies being conducted on Preventable Death and the continuum of care. The preventable death performance improvement is a joint effort between the Joint Trauma System and Armed Forces Medical Examiner System to establish a mortality surveillance system based on a robust scientific methodology. The surveillance system will generate reports as part of a standardized mortality review process which generates preventable death metrics and opportunities to improve combat casualty care. The panel reviews and surveillance system will be based on a sound methodology using explicit definitions, criteria, panel composition, clinical information evaluated and explicit standard operating procedures based on both quantitative and qualitative analyses.

9). Expeditionary Surgery Fellowship (Dr. Nielson/Cancio): Discussed how “A military relevant fellowship that prepares surgeons for the full spectrum of battlefield care.”

- | | |
|------------------------|---|
| Surgical Critical Care | Burn Flight Team |
| Trauma | Expeditionary Health Readiness Platform |
| Burn Certification | ASSET |
| ECMO | Emergency War Surgery Course (EWS) |
| CRRT | Research (ISR/JTS) |

The trauma surgeons themselves are ultimately the Stakeholders.

-On one side surgeons must learn and maintain their core capabilities or fundamental skills. This includes triage, initial trauma resuscitation, vascular exposures, damage control surgery, and leading a surgical team.

-On the other side new technologies have and will continue to be pushed to forward settings. This includes REBOA, ECMO, and CRRT.

As we move forward with training well-rounded surgeons capable of addressing the broad spectrum of patients, conditions, and settings they may encounter it is important to capture our current situation through a SWOT analysis.

Deployment tempo, separations, and PCS moves have resulted in an inconsistent presence of staff, who would be necessary to administer the program.

An expeditionary surgery fellowship would be a first-of-its kind training model.

10). Austere Surgery Update (COL Simon H. Telian): COL Telian briefed the group on Austere Surgical Care guidelines. Austere surgical groups work outside established evacuation routes, with short, defined time utilization. They support specific missions and area coverage is usually outside of the “Golden Hour”.

COL Telian covered the Roles of Care and timeframes:

- CASEVAC (1 Hour) - Level I: BAS to Level II: Forward Surgical teams
- Tactical Evac (1-24 Hours) - Level II: Forward Surgical teams to Level III: CSH, EMEDS, Fleet
- Strategic Evac (24-72 Hours) - Level III: CSH, EMEDS, Fleet to Level IV: Definitive Care
Level IV: Definitive Care to Level V: Definitive Care

In each austere surgical team (GHOST, ERSS, SOST, ERST, FRST and JMAU) there are 4-10 personnel. The basic unit for DCS is a surgeon, an anesthesiologist and two other personnel (surgeon/tech, nurse/PA, or ER/medic). Surgeons in austere environments see a lethal cycle of coagulopathy, hemorrhage, acidosis, and hypothermia which ultimately lead to death. Their capabilities in the austere environment include surgical instruments with a sterilization plan, blood products, active re-warming, monitors, ultrasound, and lab (iSTAT). COL Telian discussed having an austere surgical CPG outline which would include mission planning considerations, team capabilities, leadership responsibilities and documentation.

Deliverable Products:

-Austere Surgical Team CPG

- Pre-deployment issues
- Mission Planning / Development
- Team Capabilities / Leadership
- Equipment
- Clinical Decision Making
- Documentation

-Documentation Guidelines

- DD1380
- PFC card
- Procedure notes
- Medical Record
- Naming Convention

-AAR Repository Site

Capture Lessons Learned across platforms.

11). Education and Training Update (Col Michael T. Charlton): Col Charlton gave an update over the CoSCCC Education and Training Subcommittee briefing the group over KSA/Core competencies, the Emergency War Surgery Course (EWSC), Joint Trauma Readiness Trauma Platform (JTRTP), ATLS-OE, and NDAA 708 Elements.

Phased implementation of Specialty KSA project

The goal of the Maintenance of Expeditionary Currency and Competency Project is to define training standards for deployed DoD trauma team providers based on Knowledge, Skills, and Abilities (KSA) and to develop the tools necessary to meet the standards.

The KSA project has four key components and will be implemented in a phased approach:

1. Pre-deployment verification of procedural skills
2. Periodic assessment of knowledge and abilities aligned with a relevant curriculum
3. Development of a measurable “training” value of in-garrison practice
4. Appropriate remediation when indicated focused on identified training deficits

12). Operational Resources Update (COL Kirby Gross): Col Gross gave an update on the CoSCCC Operational Sub-Committee and their current activities.

Mission:

Provide tools which permit alignment of theater operational and clinical leaders.

EXSUM: Operational Subcommittee will have a final draft of the Red White Blue (RWB) Book available for presentation to ACS Committee on Trauma by 07 March 2018. Subcommittee is also identifying our next project.

Deliverables:

RWB will establish standard guidance.

RWB checklists to be trialed in January 2018.

Submit RWB Book to COT for March 2018 meeting.

Define next project.

13). CPG Subcommittee Update (Col Stacy Shackelford): Col Shackelford gave the group an update on the CPG Subcommittee and their activities. The subcommittee is currently working on:

-Training Videos for each CPG

-CPG Supply and Medication List Review

-SSG Martin

-List of items necessary to implement CPG's

-NSN for each item

-Designate critical, R2, R3

-SME input needed to review

-Deployed Medicine Website/ APP

-CPG APP – available only on non-gov't, non-Apple iPhone (Droids)

New CPG current Status:

Prolonged Field Care Ocular

- Col Shackelford to submit (10/10/17). Special thanks to Mazzoli/Reynolds for work on this.
JSOM -> JTS -> (approx. 3-4 weeks to publish)

Austere Neurosurgery

Guideline drafted and presented at CoSCCC

Draft forwarded to committee for review

Emergency General Surgery

Circulate to CoSCCC and deployed R2's for feedback.

Acute Coronary Syndrome

Special thanks to Maj Clark who is currently deployed to Hurricane relief. Will resume working on this CPG upon return.

-Goal – small set of medical guidelines

-More critical care than trauma

-Focus on Heart Attack/ Stroke/ Possibly Ventilator Mgt.

Thoracic

CAPT Jared Antevil and MAJ Bowen and currently reviewing gaps.

CBRNE

COL Given USUHS working on this. High priority based on recent events.

PEDS

Include a PEDS portion in other CPG's for reference (DCR, Burn, etc.)

Nursing

Include nursing-specific consideration for each CPG as needed.

Forensic

Reference SOP for MASCAL/ Human Remains Handling

Needs to be generalized, not just site specific.

14). Research Subcommittee Update (COL Matt Martin): Currently has 12 members.

-Focus on clinically and operationally relevant topics that directly relate to patient care

-NOT including operational durable equipment (oxygen, generators, etc.)

-Organized primarily by phase of care from arrival/triage through prep for transport

-also including "special populations" & optimal staffing

-NOT including external areas such as pre-hospital or en-route care

-NOT including general readiness and pre-deployment training, but including staffing/optimal personnel

Top 8 Clinical Focus Areas Identified:

1. Triage
2. Initial evaluation (ED/ATLS)
3. Diagnostic imaging capabilities
4. Resuscitation & initial hemorrhage control
5. Pain/sedation/anxiety management
6. Operative management
7. Postoperative & ICU care
8. Preparation for transport

Web-based survey created to rank/score priorities

-Distributed to all CoSCCC members

-Additional distribution to:

-AAST Military Liaison Committee

-EAST Military Committee

60 total respondents (4 discarded, 2 with no scores submitted, 2 with less than 50% completed)

Final total of 56 respondents

Top 5 focus areas were 1. Personnel/staffing, 2. Resuscitation and Initial Hemorrhage Management, 3.

Pain, Sedation, Anxiety, 4. Operative Interventions, 5. Initial Evaluation.

Plans for 2017-2018

- Master list with each focus area and ranked topics
- Abstract submission to MHSRS
- Publication of results in JOT or Military Medicine
- Submission of full results to CCCRP
- Possible "GAP" project
- Overlap with TCCC and ERCC

Col Stacy Shackelford, Committee Chair

Date

Enclosure (1) – Meeting Attendance

CoSCCC Voting Members:

COL Mary Edwards
CAPT Craig Shepps
CAPT Zsolt Stockinger
LTC Jennifer Gurney (Deployed)
Col Stacy Shackelford
Col Mark Ervin
COL Ray Fang
COL Kirby Gross
COL Mark Pallis
Col Randy McCafferty
CDR Mike Kearns
LTC Jason Corley
CDR Virginia Blackman
CDR Travis Polk
COL Elizabeth Mann-Salinas
LTC Martin Schreiber
COL Lance Cordoni
Col Simon Telian
Col Michael Charlton
SMSgt Tamara Ray
MAJ Colin Frament
SSG Cedric Martin
Dr. Saafan Malik
CAPT Jared Antevil
COL Scott Armen
COL Jay Baker
COL Matt Martin
COL Kyle Remick
Col Jay Sampson
LTC Jason Seery
COL Ian Wedmore

VIP GUEST SPEAKER

Lt. Gen Scott Howell (SOCOM)

Subject Matter Experts:

COL Andrew cap
LTC Jim Pairmore
Dr. John Holcomb
Dr. Russ Kotwal
Dr. Don Jenkins
Dr. Nick Namias
Dr. Mary Ann Spott
Dr. Don Marion
Matt Welder
Shelley Jorgensen
LT Jonathan Hamrick
LT Benjamin Miller
Col John Mitchell
Harold Montgomery

COSCCC Staff:

Mr. Dominick Sestito

Additional Guests:

LTC Cord Cunningham
Lt Col Antoinette Shinn
COL Kurt Edwards
LTC Kevin Cron
COL Bob Mabry
CDR Randy Bell
MAJ Mia DeBarros
Maj David Northern
LTC Jameson Nielsen
SSG Matt Miele