COMMITTEE ON SURGICAL COMBAT CASUALTY CARE

BUILDING THE MILITARY TRAUMA SYSTEM FOR THE FUTURE

22ND -23RD 2023

ESTANCIA DEL NORTE

SAN ANTONIO, TX

Meeting Minutes Prepared by: Mr. Dominick Sestito

Day #1 CoSCCC March 22nd, 2023

Day #1		
Time	**Presentation**	**Proposed Speakers**
0800	Welcome & Introductions	Tadlock/Sestito
0805	JTS Update and DHA Strategic Plan	Gurney (20 min)
0825	Overview of CoSCCC TMD Summit	Jensen (15min)
0840	Extramural Lines of Effort-Update	Tadlock (10 min)
0850	Research Update from Future Trauma Leaders Program	Russo (20 min)
0910	**Discussion**, Q/A regarding DHA Strategic Plan, JTS, CoSCCC Roles & Synergy with other organizations. Moderators: **Jensen**. Panelists: Gurney, Tadlock, Baker, Graybill,	
0930	**BREAK**	
0945	Deployed Surgeon Talk – Ukraine **VIRTUAL**	Dr. Samofalov (45 min)
1030	**Discussion**, Q/A regarding Ukraine Theatre, Summary of Lessons Learned for Future LSCO. Moderator: **Gurney**	
1050	Non-Surgeon Surgeons: Current Procedural Training Paradigm for 18D	Loos or Scarborough (20)
1110	Surgical Procedures By Role 1 Providers: It is All About Ethics	Monty/Drew (25 minutes)
1135	ARSC Curriculum Development WG update	Mosely/Baker (20 min)

0800 – Introduction: The CoSCCC conference opened with an introduction by CDR Jensen, Chair of the Defense Committees on Trauma (DCoT) and CAPT Tadlock, the Chair of the Committee on Surgical Combat Casualty Care (CoSCCC). The focus on this meeting will be to ensure we prepare for the future fight, while ensuring we maintain the lessons learned from past conflicts. Military Medicine must prepare for the war already fought (e.g. CENTCOM), but prepare for future conflicts remembering previous lessons learned and earned while anticipating the challenges we will face in the future fight.

One theme throughout this meeting will be the Theory vs. Reality of "Doing More with Less." When is doing more with less **just less** and the small team size, or small footprint is no real capability at all?

CAPT Tadlock reviewed current lines of effort

1. Neurosurgery Statement
2. ARSC Planning Guidance
3. Non-surgeons performing surgical procedures

Hail and Farewell recognizing all previous Members and their contributions to the DCoT/CoSCCC, and introducing new Members elected to the CoSCCC.

COL Gurney *reviewed the "burning issues" we first tried to address when standing up the committees in 2016. Many of these issues are still burning issues that have not been correctly remedied or solved. COL Gurney recognized previous JTS Directors and her vision to move the JTS forward under her tenure.*

COL Gurney *reviewed the 5 Major workstreams and how the JTS needs help "doing stuff." During this inter-war period we need to get things done! This is our catch up and preparation time!*

During this CoSCCC meeting, JTS is also simultaneously hosting a meeting for a trauma systems review by the Military Health System Strategic Partnership with the American College of Surgeons (MHSSPACS). COL Gurney summarized the agenda for this review and its goal to help make the JTS better and more impactful, because we are NOT prepared for future conflicts; our Systems are not capable of handling the large number of patients characterized by Large Scale Combat Operations (LSCO) , nor can they capture, process, and promulgate casualty data fast enough to save lives on the battlefield. Compared to the last 20 years of war, during LSCO our case fatality rate WILL likely be immensely higher!

JTS has little Authority, but we do have HUGE amounts of Influence!

CDR Jensen discussed last year's intent with the decision to host a Trauma Medical Director (TMD)/Trauma Program Manager (TPM) and nursing colleagues meeting vice the traditional CoSCCC. The JTS hopes to help grow and mentor these very important roles within our Combatant Command Trauma System (CTS) so it is ready for future conflicts. The goal of the TMD/TPM summit was to link and define roles, help codify the peacetime mission and connect Military and Civilian trauma leaders and partners to grow relationships and help prepare the CTS for future conflicts.

Our biggest challenge is supporting and growing trauma expertise within the MHS when we are not training and deploying to go to war on a regular basis…while simultaneously supporting dependent care and the development of the entire MHS.

Mr. Sestito covered administrative tasking's for DTS travelers, Hail and Farewell, new membership requirements, updating personal information on the sign in roster and items related to membership.

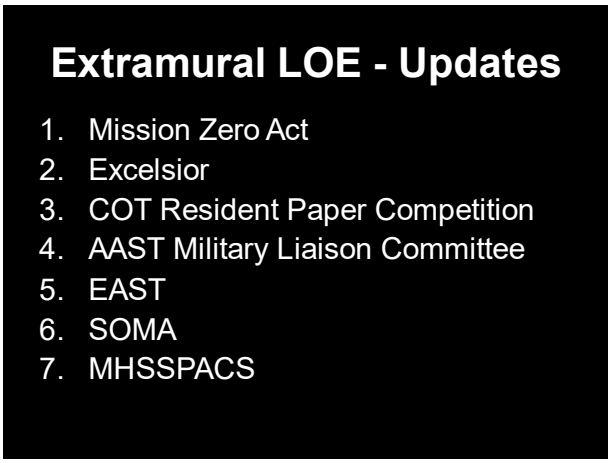
LTC Roedel: *We keep fighting for "siloed efforts" with resource limited support. The future of having enough deployable providers must be done through the MTF's!*

COL Detro *(Virtual) - We need to build these partnerships. Doing these system surveys…we are not going to have the system assets given our current state. Global Health Engagement partnerships are imperative!*

COL Gurney *– System assessments is a capability we are trying to build. International system assessments and a more robust WHO tool is necessary!*

1. **<u>Extramural Lines of Effort Update</u>** (CAPT Tadlock): Highlighted many Extramural lines of effort and the importance to attend, submit and be engaged in these areas.

a. -The vast majority of deployed surgeons providing Role 2 Care Past/Present/Future tend to be general surgeons or other Surgical Subspecialties (e.g., Orthopedics and Urology).



2). <u>Research Update from Future Trauma Leaders Program</u> (Maj Rachel Russo): spoke about her pathway as a Future Trauma Leader.

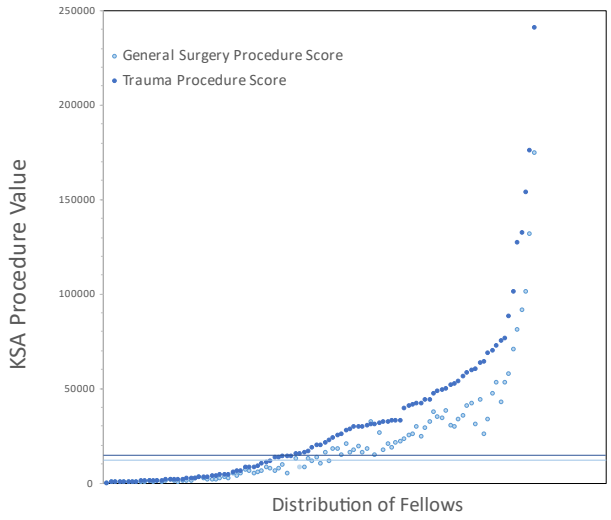
"When I applied to be a future trauma leader, there was no military position- at least, I wasn't aware that there was, until I was selected as such. I didn't really know what I was getting into. So I spent some time figuring out where I fit. I understood that the parent organization was the American College of Surgeons."

- I started with the TQIP mortality reporting working group
- Which got me on the stage at the TQIP conference talking about algorithms and best practices
- Which got me invited to the TBI expert panel to help with the ACS PIPS best practice guidelines to contribute to a section on a topic I have written about before, using the AAST PROOVIT registry
- Which got me in front of the AAST where a past mentor named me the section lead for the new BCVI section of PROOVIT
- Which got me invited to the AAST-COT best practice guidelines for sedation of intubated patients, a topic I authored for the SCORE curriculum
- Which increased my visibility to military leaders who allowed me to participate in the JTS and the development of clinical practice guidelines for other topics I've written about
- Which led me to win the EAST Military scholarship, which got me on the stage at EAST, where I was then invited to join the emerging MCP-QIP for institutions receiving mission zero funding and need to track KSA productivity.

Lesson Learned - **you can't implement quality improvement changes without education, and you can't implement systems changes without advocacy**

One of the education projects I am working on is Assessing the Value of the AAST ACS Fellowship using KSA readiness metrics.

- Study questions:
    - Do fellows participating in a two-year trauma/SCC fellowship with a designated AAST-ACS year meet KSA standards?
    - What gaps exist with existing programs (curricula, case logs) to improve alignment for military trainees?
- Other potential questions
    - Does the ACS fellowship year (exclusive of the SCC year) enhance general surgery readiness?
    - Are the trauma fellows graduating from the two-year AAST accredited fellowship more ready than those that don't?



- 28,384 individual entries
- 3,891 critical care encounters excluded
- 24,493 procedures performed by 103 fellows at 26 programs
- 8 AAST ACS approved sites logged no cases
- 1,716 procedures not counted towards either GS or Trauma
- 1,253 procedures counted towards Trauma but not GS
- 595 procedures counted towards GS but not Trauma
- 55 fellows meet trauma procedure threshold for KSA readiness
- 43 fellows meet the GS procedure threshold for KSA readiness
- *This analysis includes first year SCC fellows and some fellows with <1mo experience*

Summary of my accomplishments:

- 12 Awards and Recognitions
- $13.3M Grants
- 11 publications in print
- 9 in production
- 1 book chapter
- 12 speaking engagements
- 7 pending invited talks
- 1 patent

Discussion:

CDR Jensen – *Military specific curriculum/GME. We always get push back about restrictions and 24hrs in a day etc. Systems based practice needs to be emphasized…this is the Operational Environment! We aren't asking to change but modify to include the Operational Environment as part of the approach.*

Maj Russo *– We have a lot of deferred trainees because they are limited to a few programs...leverage residents to engage in access and support of funds, travel, etc. for deferred residents. I was only successful because I had embedded AD personnel to push and support my requests.*

COL Gross- *Civilian thought leaders are so vital to this moving forward/sustainment. What is the process for future trauma leaders who don't know how to get started?*

Maj Russo outlined the requirement and application process. The biggest hurdle was having both Military obligations and clinical to the Civ partner and to the base…I do all this on my "own time" …we need to have time allocated to these OPR line items.

MHSSPACS/ACS/CoT Members enter meeting and introduce themselves, their background and thank COL Gurney for the invitation to attend.

3). <u>Deployed Surgeon Ukraine</u> (Dr. Samofalov)**: Provision of wound care during the Russian-Ukrainian war.** Dr. Samofalov is a Surgeon of 61 Mobile army surgical hospital, head of role II unit, MD, PhD, MPA, Director of the Southern Interregional Department of the National Health Service of Ukraine.

Dr. Samofalov gave a moving presentation about the damage sustained in the conflict with Russia and the casualties they received. Challenges and problems other than Doctors not trained in Military...infrastructure etc.

- More than 1000 civilian hospitals were ruined by the Russian missiles
- More than 900 Civilian Healthcare institutions were ruined by Russian troops
- Changes we made for the hospital during the war

Anti-shatter protection **Dim-out**

- Intensive care and surgical theatre were on the 4-th floor
- Move them to the first floor

Dr. Samofalov spoke on the improvised devices and ammunition used. New age of unconventional weapons. Undetectable penetrating injuries…. phosphorus bombing – burns etc.

Shrapnel ammo

Video from open source

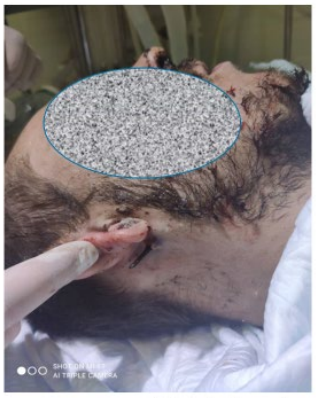


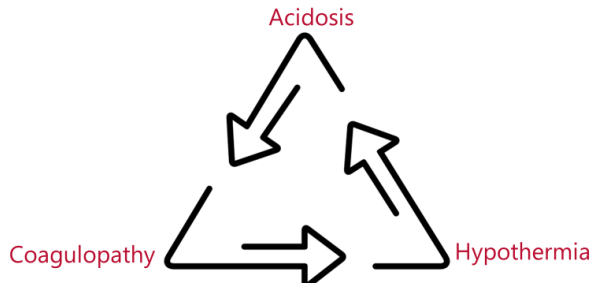
Photo by the author

Implementations of new sophisticated diagnosis and interventions:

- I/O
- Two Tourniquet not enough for each soldier
- Ultrasound

Had to modify surgical approach due to environmental conditions and loss of power, triage of multiple patients etc.

Death Triade



Choosing criteria

Trauma which leads to loose the reserve/compensatory resourses:

- High energy trauma
- Multiple trauma
-Visceral +vessel trauma

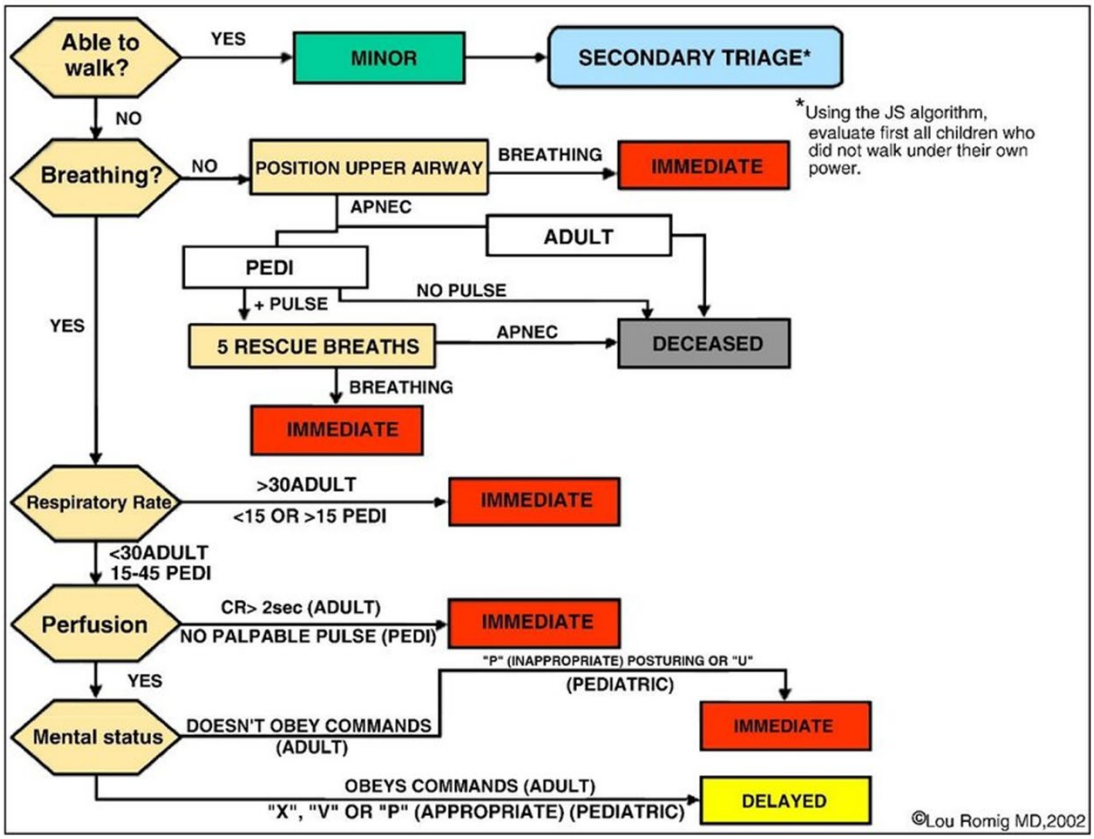
Medical tactical condition:

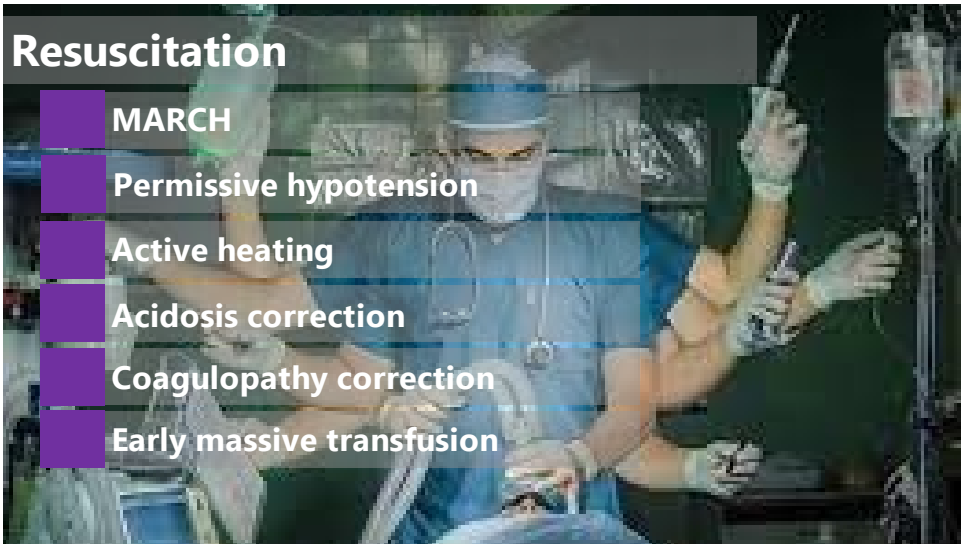
- Mass casualties
- Poor surgeon qualification

TRIAGE algorithm implemented:

- **In the ER:**
  - MARCH
  - Primary trauma assessment
  - Check for bleeding
  - Ultrasound e-FAST
  - X-ray

- Wide spectrum antibiotics
- Tetanus anatoxin
- TRX
- Assessment and decision take average 7 min 30 sec
- Shortest time 1 min 20 sec





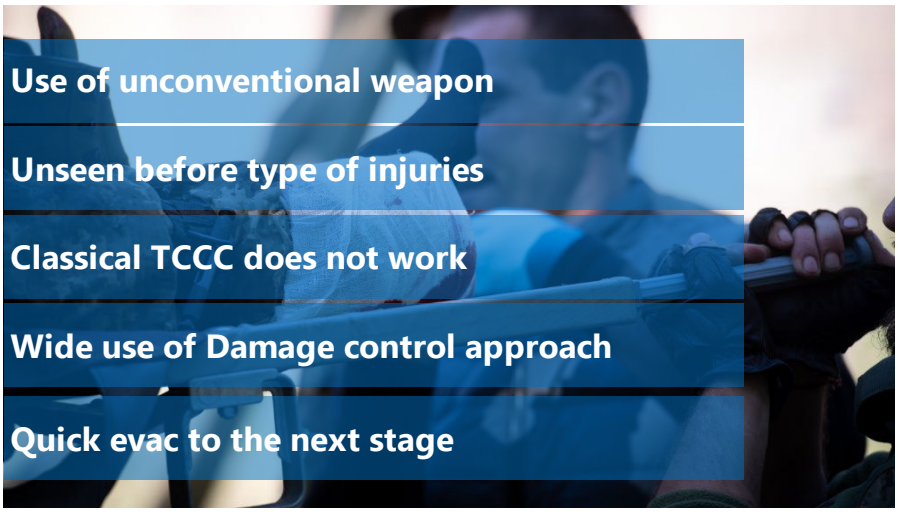
Direct blood transfusion

The order of the Ministry of Health of Ukraine dated June 11, 2022 No. 1192 approved the Standards of medical care "Providing medical care to victims of hemorrhagic shock at the pre-hospital and hospital stages of trauma"

Active heating

- **Immediate aggressive heating of patient**
- **Renew end-organ perfusion**
- **Prevent coagulopathy**
- **Restores normal coagulation**

Summary of Lessons Learned:



Discussion: Dr. Samofalov took questions from the group. He discussed how medics were not properly trained in the application of tourniquets and the number of tourniquets fielded to the POI medics.

CDR Brandau: *Are you receiving any pre- patient information or are they just arriving unannounced?*

Dr. Samofalov *- In Ukraine we have radios and higher Commander, but we rely on group decision also known as organized anarchy. Communication is not good…radio is not enough. Russians can easily listen in use this intel. Also, I use the terms Role1, 2,3 from what I read and learn from the internet so I may not use these correctly as you know them…I try to make the same when I explain.*

I had to advocate for more surgeons to establish a Role 2 like you know it. We don't use mobile types for Role 2 we just use hospitals. There are no civilian Dr's, but if there are we can ask them for help and they can volunteer to assist. Most of the time it is someone like me with experience and one or more with new knowledge and small experience. They learn and assist to work on smaller wounds, skin closer or something while I go on to more worse patient.

When we had maximum 8 surgeons, we had 10 days of worst fighting we had approx. 1000 patients. Every day 5-10 DCR patients. We had some Nurses from maybe 2-10 depending on situation.

CAPT Tripp *– What types of NDBI are you receiving and how is that impacting Combat Casualty Care?*

Dr. Samofalov *– Many soldiers are older than usual, so we get a lot of chronic diseases. When fighting is low, we try to address these issues too. I am Pediatric specialist, but I have to learn all systems to give additional help to all patients.*

Dr. Holcomb – *what lessons do you try to train young surgeons on with your experiences?*

Dr. Samofalov – *To do a normal head to toe checkup, he just focusses on big wound and not focus on Xray or labs or assessment. Big wounds are great but if guy is yellow or green or dying, make the total examination of the patient. On quiet days we take ultrasound and personnel and lay down in ER and show them to do examination of person over and over and over to know situation where multi casualty he can do check on his own.*

The use of antibiotics in Ukraine is awful and we use what we can and try and follow CPG protocol. All of the patients get tetanus and very important to have a big amount of clean washable water to clean the wound. Ukraine believe antiseptic is good on wound, but we learn from US training "whatever you can drink you can wash the wound," this is not antiseptic. We operate in non-sterile environment; we have to do in operative uniform because even gowns are soiled with blood.

CAPT Tadlock *– where and when are you using blood products?*

Dr. Samofalov *– First thing I do when I arrive is make a good blood bank. We have no platelets at this level. We use blood of patient from thoracic cavity and put it back to blood flow. If abdominal cavity it is questionable, but I still try if intestine is not involved, but getting blood back to circle of life better than no blood at all. We take soup spoon and pour through gauze and into bottle, we use antibiotics and heparin and put it back to blood flow…. we do not have special device for this. Walking blood bank not used unless multi casualty situation.*

Instruments are used in light and heat and special storage with ultraviolet. We do 1 ½ hrs. and then into ultraviolet boxes and stay there until ready to use and then we clean with sterilization solution before using. It's washing, solution, high heat, and UV light.

****The room gave Dr Samofalov a standing ovation for his efforts and dedication to saving lives. ****

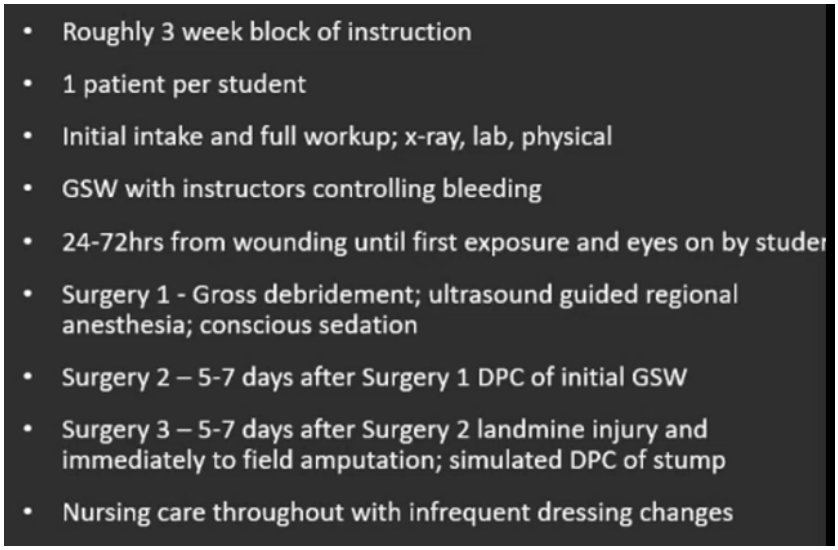
4). <u>Non-Surgeon Surgeons: Current Procedural Training Paradigm for 18D</u> (SCPO Scarborough): CAPT Tadlock reintroduced the topic and asked the CoSCCC if a formal Position Statement on the topic from the CoSCCC is needed. We do not have enough surgeons in the Military…we will have less in the future, given the current state of manning during "peace time" and recapped the reality that in a LSCO situations, there may be a requirement for non-surgeons to perform surgical procedures to save lives.

SCPO Scarborough gave perspective on JSOMTC and his views and opinions.

The main Prolonged Field Care TRUTH is "if you think you need a surgeon or intensivist in the field, put one there."

SCPO Scarborough gave a quick vignette of a patient he interacted with on deployment. He had to debride a wound that was grossly infected, his ex-fix had been in place for months and was fully supporting his body weight with no bone repair formation happening upon x-ray.

An overview of the JSOMTC curriculum was presented and what its intent is, which is not for special operations medics to perform surgery. The intent of the course is to teach basic principles of management of war wounds.



COL Gurney *- I 100% think this is a skill that needs to be taught and practiced because of the environment you are required to function in. The problem set we are here to discuss is the intracavitary and junctional hemorrhage. You do not have a massive transfusion capability so the question to answer is what do you do…intervene or provide palliative care?*

SCPO Scarborough *– I will be the first to admit I have scrubbed into x-lap, and I would be scared #$#%^ to try and perform that procedure without the proper support and staffing. There are too many potential complications and initiating those procedures could lead to a worse death than not intervening.*

5). <u>Surgical Procedures By Role 1 Providers: It is All About Ethics:</u> <u>(CAPT Drew)</u>: "I hope to help frame this conversation, and not try and tell medics what they can and can't do. I do not think this is a medical question…I feel it's an ethical question."

What is your primary identity…for example are you an Officer first or a Physician first? Should non surgeon physicians be conducting "heroic procedures" to try to save a life?

We need to ask these medics, what situation are you going to be in…what is your commander going to support, and what is expected of you from your brothers and sisters performing those operations. There must be a "time stamp" on TCCC…you can't expect someone with a backpack of supplies to keep someone alive for days on end.

COL Holcomb *– comment on the ICRC documents. The reason they only talk about extremities…is because the people with cavitary injuries are already dead. They focus on extremities because what you didn't talk about is physiology and anatomy, you can't change that about the ICRC books.*

COL Schreiber *– No matter the technical skills you are taught, way more important is the judgement piece. If I open a belly without a blood bank you have nothing but a dying patient whether it's me or a medic. Resources are massive decision-making piece of the surgical decision-making process…what's your time to resupply?*

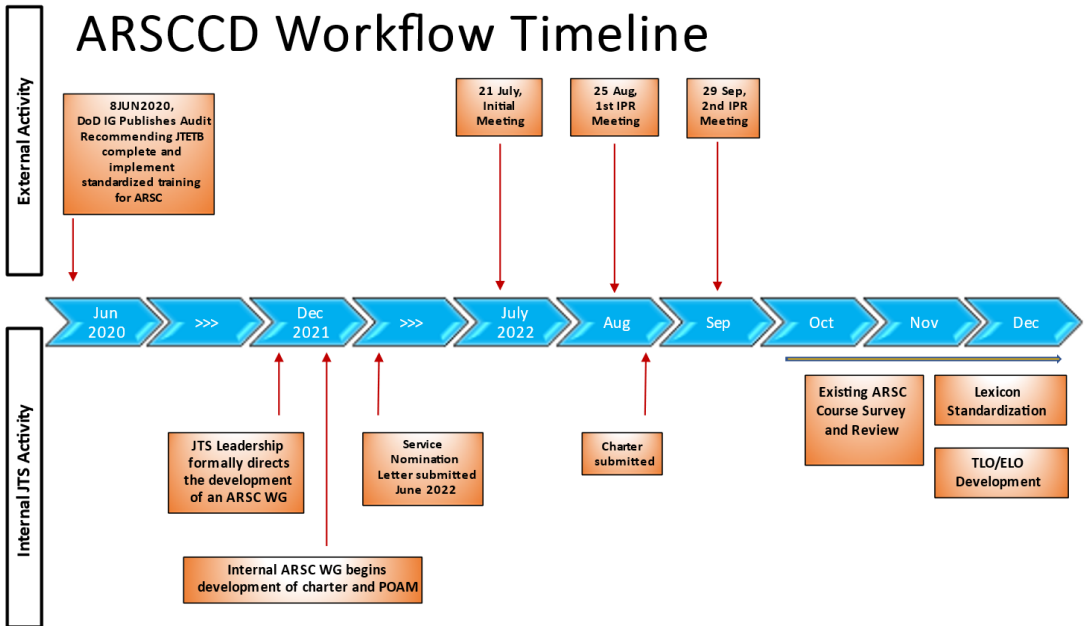
LTC Lesperance *– I totally agree. I am still learning after 10 years. This is a false dichotomy. Thought experiments are fun to talk about, but rarely is it ever cut and dry in a combat environment. REBOA, cool intervention that every special medic wants to try to stop bleeding, but the person can be hurt really bad by doing the wrong intervention.*

CAPT Drew *– exactly my point, this isn't about lets teach everybody how to do skills and think we have the capability, you need to know when to do these interventions.*

We haven't talked about time yet. Time to do it because of the tactical situation…just because you know how to do it, make the judgement to do it, tactical decision making is even more important because this could lead to more injuries to the team.

CAPT Tadlock *–I take regular ADVISOR call. I know many of you in the room also take ADVISOR call. How many times have any of you been called for an unplanned training event where you are asked to walk a Medic through a fasciotomy? Even when these training events that are planned, and it is still challenging to walk someone through that scenario over the phone. This is happening now and I think the CoSCCC needs get ahead of if as we are the JTS surgical committee. Later today during the breakout session we will talk about how and if the CoSCCC should address surgical procedures performed by non-surgeons.*

6). <u>ARSC Curriculum Development WG update:</u> (Dan Mosely): We are trying to frame the reference every time we meet to develop this curriculum. Why is the JTS doing this?? – Primarily because we have the Authorities, through a DoD IG report that recommended the Joint Education and Training Branch of the JTS do this…because the feedback from the MILDEPS was "we were unprepared."



Our first steps:

-Lexicon Standardization

-Curriculum Organization

-Implement the Addie Model

- Analyze
- Design
- Develop
- Implement
- Evaluate

COL Gurney *– this whole work group is being created because we had two courses that were very, very good with many of you in this room, but the Services up to the SG level would not make the courses a requirement! This is drowning in the bureaucracy of the DHA.*

Dr. Mosely *– That's the goal to provide a course, not to tell the Services what to teach, but give them the tools in a plug and play manner to ensure standardization and metrics to gage proficiency and success of the course.*

LUNCH

1300	Tri-Service Physician Assistant Overview	(30min)
1330	**Discussion**: PAs as Force Multipliers for Single Surgeon Teams: Should all PA's have standardized Role 2 specific training to include Reps & Sets assisting surgeons.	Moderators: Brittany Hout & Rebecca Rausa COL Matthew Douglas – Army GSPA; MAJ Brian Gomez – Army GSPA, currently an IPAP instructor who can comment on surgical training pipeline for general Pas; Maj Jesse Gronsky – Air Force GSPA; LtCol Aaron Cronin – Army EMPA; MAJ Preston Lopez – Army Ortho; LT Rachel Robeck – Navy EMPA
1400	Case Records of the JTS: How Would CCC Differ during LSCO characterized by prolonged Role 2 holding times (4-7 days)	Tadlock (20)
1430	Principles of Austere Critical Care	Tripp (30)
1500	**Discussion**: How do we train Role 2 Surgical Teams for the Future Fight?	Moderator: Tadlock Graybill, Military Surgery Residency PD, Tripp, Anesthesiologist/CRNA, Surgery Consultant
1530	**BREAK**	
1545	**Work Groups / Line of Effort -**	
	Conventional Role 1 Surgical Procedures Work Group: **Leads:** -Should there be a list of Recommended Procedures? -What Should Be on that list? -Should there be at joint CoSCCC/CoTCCC Statement on this topic? CPG?	
	ARSC Operational Planning Guidance Work Group; **Leads: Mosely, Baker**	

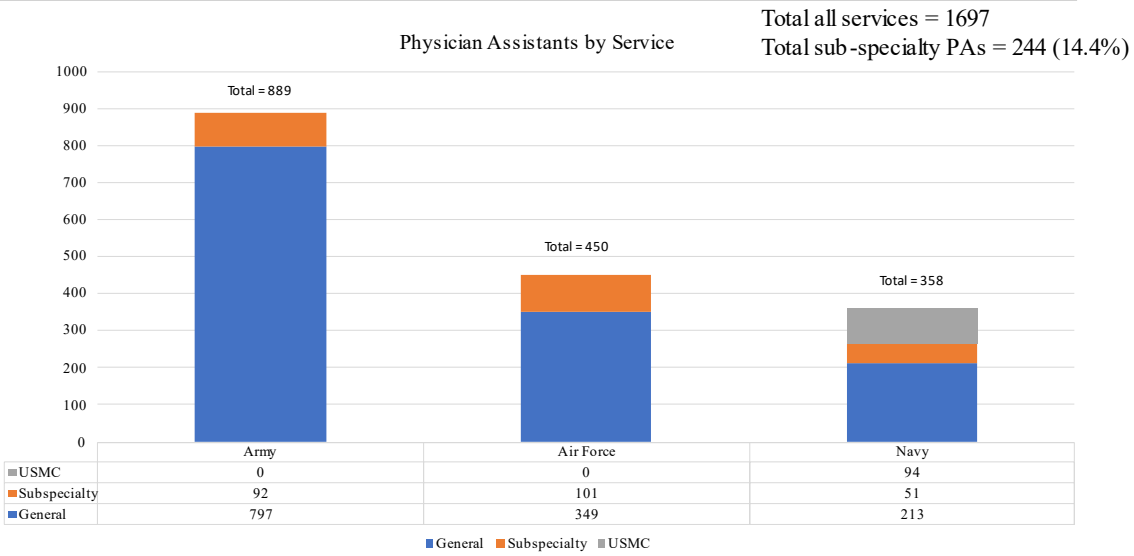
Case Presentation: The JTS Thursday morning CCC conference patient presentation for PI review from January due to the relevance of the ACS reviewer's relevancy to the discussion agenda topics of skills sets and sustainment. The case was a lateral canthotomy and hurdles encountered throughout the continuum.

7). Tri-Service Physician Assistant Overview: (LCDR Rausa/Hout): LCDR Rausa gave an overview of the history of the PA curriculum, PA pipeline, training and utilization followed by a panel discussion with a rep from IPAP.

Typical Civilian PA Workforce by Specialty

- Primary care/Family medicine/Internal medicine – 45.7%
- Emergency medicine – 11.8%
- Orthopedic surgery – 10.8%
- Cardiothoracic and vascular surgery – 3.3%
- General surgery – 3.0%
- Neurosurgery – 2.2%

Total Force : PA Utilization



CAPT Tadlock *– Unfortunately they fall into the same paradigm as Enlisted Medics at MTF's where they are often tasked with multiple administrative collateral duties and are not offered the full set sustainment training and operational training/experiences to relevant to Expeditionary skills sustainment.*

Discussion: Moderators: LCDR Brittany Hout & Rebecca Rausa / Panel Members: COL Matthew Douglas, MAJ Brian Gomez, Maj Jesse Gronsky, LtCol Aaron Cronin, MAJ Preston Lopez, LT Rachel Robeck

LCDR Rausa *– (with regards to surgical PAs) one of our biggest concerns is the proposed utilization at Role 2 in LSCO. We have a broad skill set but are there enough specialty trained PA's to fill the gap in the absence of a surgeon?*

MAJ Gomez *– a lot of the focus of our training is basic general surgery, fluid management and basic surgical procedures. We need to initiate these talks to give us a starting point for a potential "requirement" to close the gap of lack of surgeons in the Military. 35-40% will be prior IDC, PJ, advanced medical background letting us press the gas a little and push the envelope to teach them advances medical live tissue training, wound packing, chest tubes etc.*

COL Douglas *– The thing about the IPAP program is that majority of the applicants have previous medical enlisted specialties. The curriculum is to teach you to "do more" and how to keep healthy people alive.*

LT Robeck *– my experience at BAMC was with ER residents and Gen Surg, rotations through University Hospital and trying to enhance traumas into the OR and expanding rotations into the Burn ICU etc. It's a broad experience but I felt very incapable of managing a trauma when deployed with a Marine unit on my first deployment. I did not feel trauma proficient at all! TCMC was the only training I could get my command to send me to.*

The two questions are – do we expect every PA to be "ready?" and then are we using our specialty trained PA's appropriately?

CAPT Tadlock *– the answer is yes and no. We expect them to be ready, and no they are often not ready right out of the traditional PA pipeline.*

LCDR Rausa *– the problem is that even when I attended ASSET+ I was only first assist as this is surgeon focused training. I could have learned a lot more and expanded my baseline knowledge would have benefitted me much more. I did however learn a lot…most importantly I learned "what I didn't know." First assist training and fellowship specialty trained is a huge difference, and that's the value we bring to the fight!*

LTC Roedel *– we do not have a skill identifier for these PA's…so how do we ensure the pipeline is being properly identified and utilized across the force?*

COL Douglas *– You are correct, and I do not have a good answer for you currently.*

Maj Merkle *– PA's as part of the team are a force multiplier to augment our ER Medical team and can handle more surgical capability…EnRoute care if needed etc. Surgery occurs where the Surgeon is, but it does make us more modular and unique.*

LTC Brown *– Reps and sets, there aren't any TDA positions which is another area of opportunity to create billets for these folks.*

COL Detro *– These issues have been dealt with since 2003. It is very difficult to add to the end strength when it has been capped by congress. Case load is also an issue OCONUS. Small MTF's don't bring you to the OR because of lower case load, and lastly no growth for PA's in MTF's.*

Maj Merkle *– We are trying to stand up a WG to codify what a Surgical PA is, what they can and can't do. We appreciate this Committees assistance to help the ACS drive that effort and ensure we get it right the first time.*

8). Case Records of the JTS: How Would CCC Differ during LSCO characterized by prolonged Role 2 holding times (4-7 days): (CAPT Tadlock):

- *For any Role 2 Size Matters:*
    - *Capability & Capacity is proportional to Casualty Throughput, Team Size , Blood Availability & Resupply*

Role 2 Care + LSCO = Prolonged Holding On the order of Days Not Hours

How does the JTS, DCOT, CoSCCC Prepare for the Future Fight Instead of the War Already Fought (CENTCOM)?

AFTER DAMAGE CONTROL in the Role 2 goes beyond the skills taught in ASSET+ and standard Role 2 Team Training

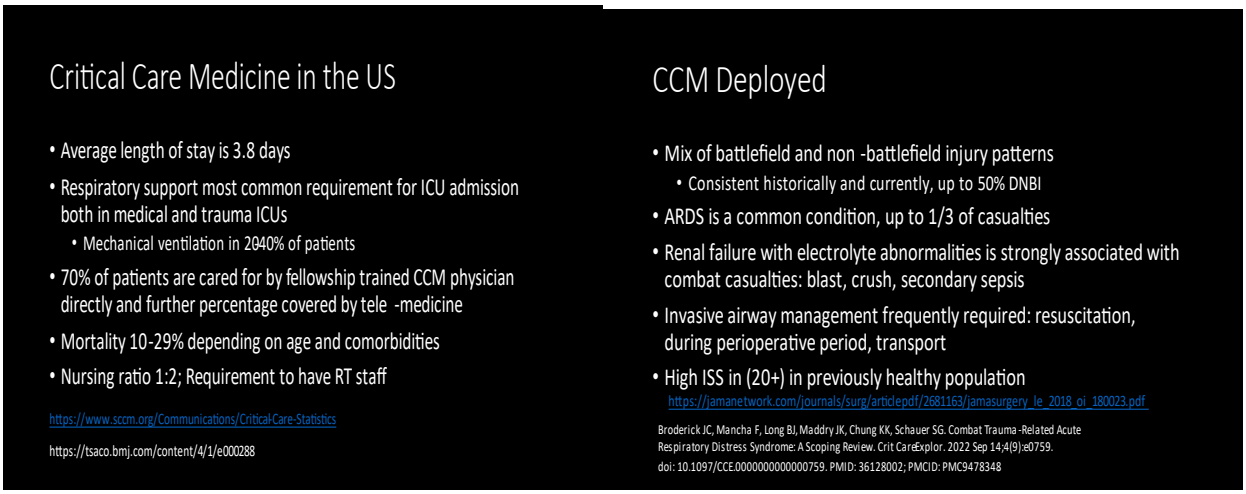
CAPT Tadlock gave numerous examples of PFC situations potential in LSCO and proposed how times would be delayed and the decision-making processes would be different in those situations compared to the last 20 years of war…how does it change decision making to be in a resource constrained environment with no MEDEVAC capability?? What do you do differently as a surgeon?

Ex. 4–5-day holding of a vascular injury?
-Leave shunt in place?
-Definitive repair attempt?
-Do you even have access to x-ray or contrast for angiography?

What about Critical Care? Does A General Surgeon + CCRN + CRNA +ERMD = Critical Care Capability? Probably not given ACGME requirements, and the lack of acuity and critically ill patients in our MTFs.

9). Principles of Austere Critical Care: (CAPT Tripp)**:** Prior Army medic, CAPT Tripp gave his perspectives on Critical Care for the Future fight.

- Critical care can be accomplished anywhere, TCCC is the foundation
- No one gets better at a task by not doing it
- Demands for critical care are moving farther from standard care delivery environments
- Opportunities for non-CCM staff to practice CCM are limited
- The first three patients a team sees should not be practice



CAPT Tripp highlighted Resuscitation, Hemodynamic, Respiratory support, and transportation gaps

Current Gaps:

<u>Manning:</u> can we meet current projected scenarios with current manning? Expectation should be continued receipt of casualties while caring for others.

- Role for increased nursing, RT, CCM support
- Assume inexperienced team members
- Does a cap on patient numbers exist?
- Tele-health as force multiplier
- Role of ships company or other non-medical assistants
- Agreed upon work/rest schedules
- Conservation of critical manpower: surgical care

<u>Training:</u> Can we meet our current operational needs with current training platforms? Is team training necessary? What training metrics should be trained to?

- Training of CCM skills critical to non-CCM trained staff including enlisted medical personnel >>>>MAJOR CAPABILITY GAP
- Clearly defined and trained to CCM skillset in deployed medical staff commiserate with expected injury patterns
- SUSTAINMENT of skills
- Be brilliant on the basics
- Train to "soft" skills like patient hand overs, documentation, preparation for transport, prevention of secondary injuries, tele-medicine
-

<u>Equipment:</u> does our current equipment match skills? Does equipment match projected injuries and care for those injuries? Can this equipment be deployed to operational platforms?

- Clear consensus on what equipment makes biggest impact
- Predetermined limits on resource expenditure
- Avoidance of technology intense monitoring equipment
- Limited number of medications for treatment of required critical care competencies
- Training of teams to projected casualties, on the platform, with equipment that will be available
- Consistent equipment lists for cross functional teams

Recommendation for Future Fights:

- Align team structure to projected injury patterns and projected patient movement time metrics
- Identify specific treatment modalities as requirements for projected injury patterns
    - Renal replacement therapy
    - Advanced mechanical ventilation
    - ECMO capability
    - Critical care transport
- Bring critical medical specialties together to agree upon cross functional skills and train to them and build them into requirements
- Improve exposure to critically ill patients for all members of the care team, including enlisted medical staff
- Provide triage training and protocols informed by projected operations

Discussion:

LTC Sams – *Technology is often so complicated you can't even use it in the deployed environment, but we need to focus on how we function in future LSCO. We have to rethink the CCAT team structure, how to we offload task saturation?*

CAPT Tripp *– one of the real conversations we need to have is what part of the mission are you willing to degrade to enhance saving lives on the battlefield?*

Setting expectations for the line…when is enough enough. Triage and Rules of Engagement need to be reevaluated.

LTC Brown *– ACGME requirement are very low as far as Critical Care. Residency programs probably front load too. A lot of them do not do a SICU rotation after year 2.*

COL Hardin *– when you get a MASCAL everyone just reverts to the TCCC guidelines, that's how we win. We take that same model and do that mindset to the next link in the Chain…Critical Care. The questions we need to be answering are to the Left of these events…your candid talk today is maybe the most relevant we have heard. IF there is a ship struck with a missile, the reality is the Sea will take care of many of the potential patients and no one is going to care about the batteries in a Zoll monitor.*

CDR Jensen *– I think it is a unit specific discussion, but imperative discussion to have with the definition and protocols of "expectant" in future fights of LSCO. Guidance is different than guidelines.*

Many of the group concur… guidance and recommendations not guidelines because we are only capable of speculating… this goes back to ethical decision making and the difficulty of palliative care in the moment.

Survival Rate of 2% is what "they" expect based on forcing our success rates on the current conflict…those numbers are unattainable in the Pacific. No one wants to have the conversation of how do we prioritize service members for the greater good during a MASCAL LSCO attack.

Break Out Session Work Groups / Line of Effort:

- Conventional Role 1 Surgical Procedures Work Group
- ARSC Operational Planning Guidance

Meeting Adjourned 1700

Day #2 CoSCCC March 22nd, 2023

Day #2		
Time	**Presentation**	**Speaker**
0700	**JTS Combat Casualty Care Conference**	
0810	MACRO DoD Global Health Engagement Overview	Licina (30 min)
0840	EUCOM GHE Efforts	Geist (30 min)
0910	USU GHE Case Study	Maddox (30 min)
0940	Global Health Engagement: The Penn State Experience (Civilian)	Oh (30 min)
1010	**Panel Discussion:** Maddox, Oh, Jensen, Geist, Licina, Moderator: **Gurney/ Hardin** Ethics; HN Need and Sustainability; Skills Sustainment, not Training; Surgical Tourism; Deploying to get ready to Deploy? What can we learn from HN providers (e.g. prolonged Role 2 care?)	

0700 Weekly JTS Combat Casualty Care Conference: Patient presentation from an IED Suicide Vest and CME Presentation from Thornhill Medical on the portable MOVES Device - integrates multiple discrete devices – vital signs monitors, suction, oxygen generation and ventilation – into a single, rugged, compact, lightweight, energy and resource-efficient, battery-operated, and portable device.

1). MACRO DoD Global Health Engagement Overview: (Derek Licina): Enhancing the US Military Health System's Global Health Engagement (GHE) Strategy

Mr. Licina polled the audience to see who had participated in a GHE, where it was, mission and experience. Security threats are becoming more diverse, complex, and interconnected.

The Global Security Environment is Undergoing Significant Change:

- Economic
- Socio-demographic
- Geopolitical

Challenges remain which impact GHE policy implementation:

- Lack of strategy creates inconsistent approach to "why" and "how" DoD GHE policy is implemented in support of National Defense Strategy
- Lack of dedicated appropriation to implement the authority creates significant challenges for the Services and Combatant Commands
- Shortfall in guidance and joint doctrine bridging strategic DoDI 2000.30 objectives and operational / tactical execution
- Diverging approaches by Services in employing human capital and insufficient capability across the DoD to meet GHE policy requirements
- Lack of standardized GHE tools and approaches to integrate Active, Guard, Reserve, and Joint Force in support of strategic objectives
- Absence of a DoD GHE knowledge management system, processes, and integration with interagency and international partners

Effective GHE is needed to enable the DoD, their allies, and partners to address emerging threats. Integration with the Geographic Combatant Commands (GCCs) to align capabilities in support of operational requirements and strategic priorities.

-COVID -19 collaboration

Potential Benefits and Future State (1 of 2)

These are a few of the opportunities previously described that could enhance the GHE capability across the department

Policy Refresh

- Modernizes GHE policy to align with new NSS, NDS and NMS and defines objectives, principles, and responsibilities
- Defines key principles governing "how to" conduct activities across the enterprise
- Improves structure, concepts, and high-level processes underlying GHE based on recent OSD transformation
- Updates key responsibilities and the decision-making mechanisms

Organizational Transformation

- Enables implementation of new GHE policy and resourcing in support of new NSS, NDS, NMS objectives
- Translates a validated GHE organizational model into action linking strategic to tactical requirements
- Enhances decision making through effective governance structure with clear authority and accountability
- Enhances collaboration within the DoD and leads to better integration across interagency

Workforce Development

- Ensures DoD is assigned appropriate level of expertise and experience to meet policy requirements
- Enhances the professionalization and interoperability of the GHE capability
- Enables establishment of joint GHE knowledge, skills and abilities
- Standardizes education and training requirements and capabilities to support
- Enables compliance tracking

- GHE is **transformed and resourced** with a clear policy, strategy, and implementation plan to support efficient and effective implementation across the enterprise and in conjunction with interagency and international partners

Potential Benefits and Future State (2 of 2)

These are a few of the opportunities previously described that could enhance the GHE capability across the department

Dedicated Resourcing

- Enables effective program coordination and implementation across department
- Provides program guidance and avoids duplication of effort
- Establishes unified auditing, monitoring, and evaluation
- Aligns resources and implementation to strategy and greatest areas for success
- Enables promotion of greater donor and partner country investment
- Assists recipient nations in making long-term investments

Knowledge Management

- Unifies coordination and efforts within the DoD, across interagency, and with allies and partners
- Promotes openness and interoperability increasing operational effectiveness
- Eliminates duplication of content and increases consistency
- Establishes enterprise process and system supporting knowledge creation and consumption

Codifying DHA in GHE

- Creates a Combat Support Agency mission-driven GHE organization
- Increases operational efficiencies across the agency
- Reduces costs (time and money) while improving services provided to Combatant Commands
- Increases access to valuable DHA capabilities
- Supports operational readiness
- Enhances interoperability with the interagency and international partners

- More effectively enables partner countries to **strengthen and sustain their military health system** which contributes to a globally integrated and interoperable military health system
- **Supports national defense objectives**, improves the health and safety of our warfighters, and provides enhanced readiness of the medical force

CAPT Tadlock *– It seems most of the time the DoD is not as "connected" as it needs to be with Country, State and/or local level infrastructure.*

Mr. Licina *– You must get your own house in order first…interagency and then international synchronization.*

Lt Col Lyon *– We are working on updating the DoDI and working on a definition as well. We are also leading an effort in Irregular Warfare Medicine. Tactical Guerilla Operators…a Globally Integrated Trauma System working with indigenous forces.*

2). EUCOM GHE Efforts: (LtCol Geist)**:** Global Health Engagement across Europe: Current Approaches & Future Opportunities.

Lt Col Geist outlined the USEUCOM Command Surgeon Priorities and Goals:

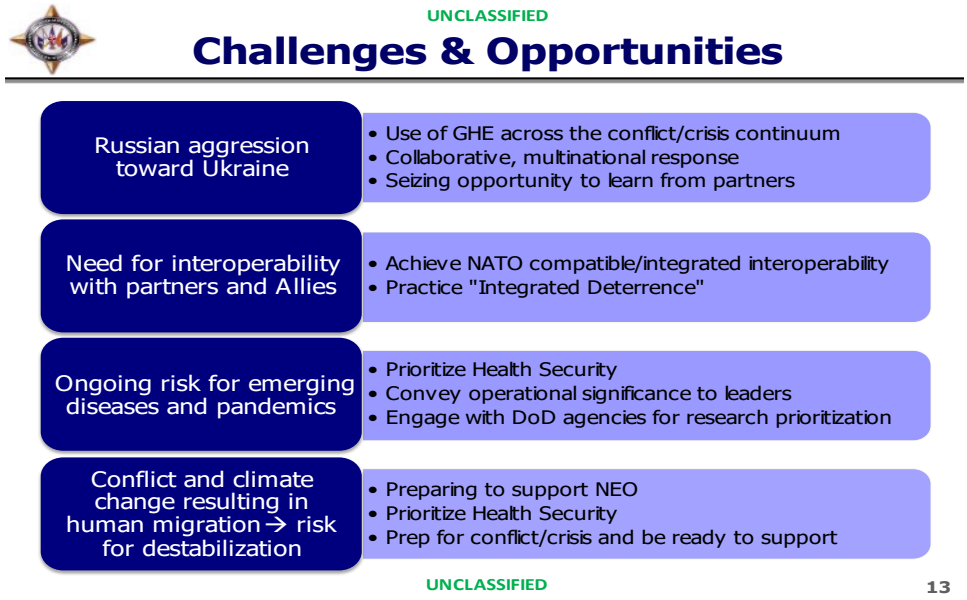
- Medically Set the Theater (Strategy/Plan)
- Enhance Interoperability (NATO/Mil-Civ)
- Enable Ops & Strategic Access (Pt Movement/FHP)

Goals

- Build trust & confidence
- Share information
- Coordinate activities
- Maintain influence
- Achieve interoperability

Facts about EUCOM GHE:

- Key-Stakeholders include Leadership vs just Medical
- Not trying to be USAID or an NGO
    - 90% fall under Title-10 (DoD) not Title-22 (DoS)
- Program Management vs Executors of GHE
    - Rely on the Bench of Subject Matter Experts
- We know the Rules and processes of Security Cooperation
- No issues working between Services/Components
- We respect the Commanders right to know
    - Task where possible; ask through official channel not dial a friend



Operational Relevance regarding GHE:

- The US becomes the trusted partner of choice
- We build resiliency for our partner militaries deter attack & influence from our adversaries
- We ensure coordinated response with partners and Allies
- We learn to work alongside our Allies and partners
- Sharing lessons learned and applying to our military med operational strategy for a new era of conflict
    - Trauma
    - Infectious Disease
    - Force Health Protection
    - Cold weather medicine
- Ensuring utmost preparedness of our line and the medical personnel caring for them

3). USU GHE Case Study: (CDR Maddox)**:** USU Trauma Systems Engagement: Jordanian Experience

USU Tactical Combat Casualty Systems Engagement (TC2SE):

- Center for Trauma Systems Global Health Engagement
    - DOD Trauma System Experience
    - USU Military Faculty
    - Global Health Experience
    - Resource for COCOM Directed GHE
    - Academic and Systems focus
- Partner with Allied Military Medical Systems
    - Develop trauma care capability
    - Improved patient care

How do we accomplish this? – Assessment of Current Trauma Care System, Gap Analysis , POAM, Ongoing Engagement.

GOAL: A Partnered System:

- Trauma system
- Higher skills
- Known care quality

- DoD implications
    - Equivalent Patient care
    - Small medical footprint = Less $$
    - Interoperability
    - Security forces assistance / access / strategic relationships

CDR Maddox gave a synopsis of the Jordanian Medical System and the request from DoD to assist with Trauma Care. In 2018 an assessment transpired:

- No organized trauma system
- No dedicated trauma teams
- No data registry or process improvement function
- No nationally recognized critical care specialty

Ask: RMS leadership goals – ACS Level 1 center for KHMC

COVID shut down all Trauma System engagement and very high mortality for ventilated patients. Could be detrimental to Government. Once again reached out to UK/ DoD to assist. And Partner.
Offered a Systems approach to COVID-19. Observed, boots at the bedside but did not provide4 care…educated, modeled, provided guidance.

2022 Key Milestones:

- RMS at KHMC
    - Established a Trauma Service
    - Coordinated with ACS chapter for ATLS
    - Trauma registry
    - Conducted Multidisciplinary Process Improvement Rounds
    - Started Trauma Fellowship training
    - Initiated process for Critical Care Specialty recognition
    - Emergency OR

Lessons Learned:

- We do not drive Change, only influence it
- Funding drives everything
- Culture is hard to change
- Success takes time
- There is no single model that works

4). Global Health Engagement: The Penn State Global Surgery Program Experience (John Oh)**:**
Mission/Vision:

Our goals are to increase surgical capacity, conduct research that is relevant to the host nation, and develop a partnership with bilateral mentoring and training. This leads to real progress in resolving global disparities, and trains future surgeons at home and abroad to meet the challenge.

- Enhance access to safe, essential surgical care in impoverished areas across the globe.
- To educate future leaders in Global Surgery
- Promoting positive changes in accessing and providing essential surgical care.
- Collaborative research and innovation with host partners.

GHE Ethics: With such a large variety of actors, organizations, and motivations involved in Global Surgery, it is imperative that we conduct ourselves in accordance with our medical moral obligations. Despite the best of intentions, we can sometimes end up doing more harm than good.

Way Forward:

- Military has a productive history of Global Health engagement
- Global Surgery is an essential component of Global Health
- Propose military partnerships for sustainable surgical delivery
- Collect data on outcomes and effectiveness
- Improve dialogues with NGO

Panel Discussion: Moderator: Hardin / Panel Members: Maddox, Oh, Jensen, Geist, Licina

COL Hardin *– I'd like to start the panel with a question of my own. We try and make change on our own, but often fail, and then we come here and feel like we are doing something to shape operations. How would someone within the DoD "sphere" engage on the GHE band wagon and not recreate the wheel for something that is already being done?*

Lt Col Geist *– GHE portfolio managers for COCOM or clinical faculty. I think DIMO is a great way to get your foot in the door for Residents and faculty/staff.*

COL Detro *– A lot of folks doing great things that are uncoordinated…we have an opportunity to get coordinated for INDOPACOM before things happen…synchronize things so they are enduring, not reactive.*

Dr. Oh *– ACGME want programs to do international rotations. This is not to fill case void, because everything is different, but for international health goals and infectious disease etc.*

Mr. Licina – *JTS in my mind, two conflicts in two geographical areas, you use allies but then you have to rely on GHE. Strategically, what does the global Trauma System look like when we have exceeded capacity with partner nations. We need to have somebody at the top thinking big issues and how to connect the dots…process improvement measurements.*

CDR Jensen *– Global Health registry, to track and measure what we are doing and adjusting fire instead of going in and "saving the day" and leaving a mess behind with no follow on or follow up.*

Col Shackelford *– 2 big gaps. Trauma System assessment capability for partner nations. How do we scale and get the invitation to these GHE to do these assessments to identify gaps and implement Trauma System capabilities to become more robust. Not just TCCC, but how to set up a EMS system or full trauma system for partner nations to show up, engage, and perform.*

Lt Col Geist *– demand from the country, which is not always the case…they must be open and willing for us to "evaluate their system" A lot of these civilian institutions need to be coordinated with Government and hosting us is a big deal. The CCMD CoC does not always match with what the Joint Staff Surgeon wants or wants to do.*

Mr. Licina *– what does "Joint" GHE look like going forward, so then the services can man train and equip, so COCOM can task the request…there is no GHE UTC. Strategically, we need to develop the requirement. I'm not sure we have even leveraged our MOU's to better partner with those allies we already have legal partnerships with.*

COL Schreiber *– should this be done strategically and regionally to take care of these injured war fighters?*

Mr. Licina *– probably not where we would like it to be. If every COCOM is asking for this, there are not enough forces to support. Abu Dhabi cost zero dollars to support, but it was an incredible challenge to get 12 people to go there to support a partner nation.*

COL Gurney – *one of the things we have identified is that we do not have people to build and sustain Trauma Systems from the Services. There is some policy, a DoDI, but we still do not have the support for implementation from the Services. Where we need help is to build this requirement for the Services to put the people in place.*

COL Hardin *– I think we are being outworked and outhustled by our adversaries. We need to have more State engagement at these meeting, as these can be more State driven than DoD driven.*

1100	NATO COMEDS TALK on War in Ukraine **VIRTUAL**	Riesberg (30 min)
1130	EUCOM CTS Overview and Update	Rittenhouse (20 min)
1150	CCRP Update	Polk (20 min)
1210	SAVE-O2 & Device Study results	(15 min)
1235	Role 1 Procedures WG Report Out and Discussion; Next Steps	(20 min)
1255	ARSC Planning Guidance WG (vote to finalize?)	(20 min)
1315	**Discussion**: Putting it All Together CoSCCC Priorities, Lines of Effort, Planning for Next Meeting, Next CoSCCC Position Statement?	
1345	JTS Chief Comments and Concluding Remarks	Gurney

5). NATO COMEDS TALK on War in Ukraine VIRTUAL: (COL Reisberg): Discussed the current medical space in Ukraine including targeting of medical assets and use of Trains for over 60% of MEDEVAC.

In Ukraine, they do have a MEDEVAC group of responsibilities, but most of these transport vehicles are not equipped with adequate medical personnel.

-Improper TQ
-Extended Transport Times to Role 2

DNBI were majority of their casualties, but consistent with Combat injuries with mild/moderate TBI.

91% of injuries sustained were from gunshots and shrapnel. (Survivor bias)

55% treatments "returned to service"

Casualties that survive to the Role 2 or higher

<u>Challenges in Medical Support in Ukraine</u>

-White Phosphorus
-Delayed wound infection

I challenge everyone to become an avid researcher of open source…I find more information than I do through DoD avenues.

-Trying to maximize DCR and DCS for non-surgeons (OB/GYN, OMFS)
-Translation efforts
-Lack of power due to damage to infrastructure – required to work and operate during sunlight hours.
- There are no Ukrainian-speaking psychiatrists and psychologists

<u>Current Needs:</u>

-battlefield losses
-high durable Medical Equipment
-X-ray/Ultrasound
-antidotes/antibiotics

CAPT Kotora *– I totally concur with the plug for open sourcing…One source we use often is "funker530" they have a ton of casualty treatment information, and you can see how the Ukrainians are accounting for casualties. We are even using open source to data mine at the Pentagon.*

****CAPT Tadlock went over Neurosurgeon Position Statement, encouraged Voting, and asked room for any current intent issues or Challenges to verbiage. Some minor edits were made to language to encourage and ensure "Purple" tri-service support****

-Neurosurgeon Position statement was passed as Final

6). USEUCOM CTS Overview and Update: (LTC Rittenhouse)**:** LTC Rittenhouse briefed on the definition of a Trauma System, requirements of a Trauma System, who is required to manage the system, and how it needs to be resourced.

Our Focus needs to be on Verifying Readiness. This is a huge challenge. What do you have to do to be "ready":

- Theater entry requirements
- Steady state vs Contingency
- Readiness Measurements
- Sustainment of readiness
    - Clinical Care at MTF
    - Simulation
    - TDY CONUS for simulation / Clinical rotation
    - Partnership with host nation medical establishment

Who provides care in USEUCOM?

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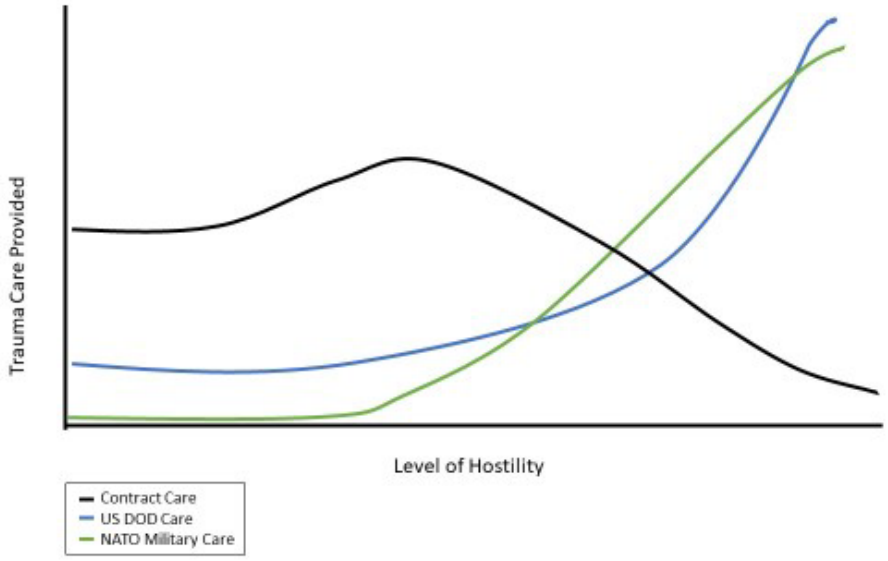
Who Provides Trauma Care



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Challenges:

- Need an agreed upon definition of readiness
- How to maintain readiness
- Integrated trauma SME in Joint and Combined exercises and plans
- What is our goal for medical interoperability and a roadmap to get there

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Interoperability

	Familiar	Integrated	Interoperable
Definition	- Understand capabilities and limitations of facility	- Easily transfer patients between MTFs - Communication and record transfer	- Interchangeable components / personnel
Advantages	- Knowledge of battle space - Able to plan resource allocation	- Single logistics / patient evacuation process - Decreased duplication of capabilities	- Improved flexibility - Better resource management - Better sustained long term
Challenges	- Need universal definitions - Caps change	- Requires training and exercise - System/ Equipment incompatibilities	- Language - Differences in training and experience - Command and control

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Mindset Change from CENTCOM Operations:

CENTCOM

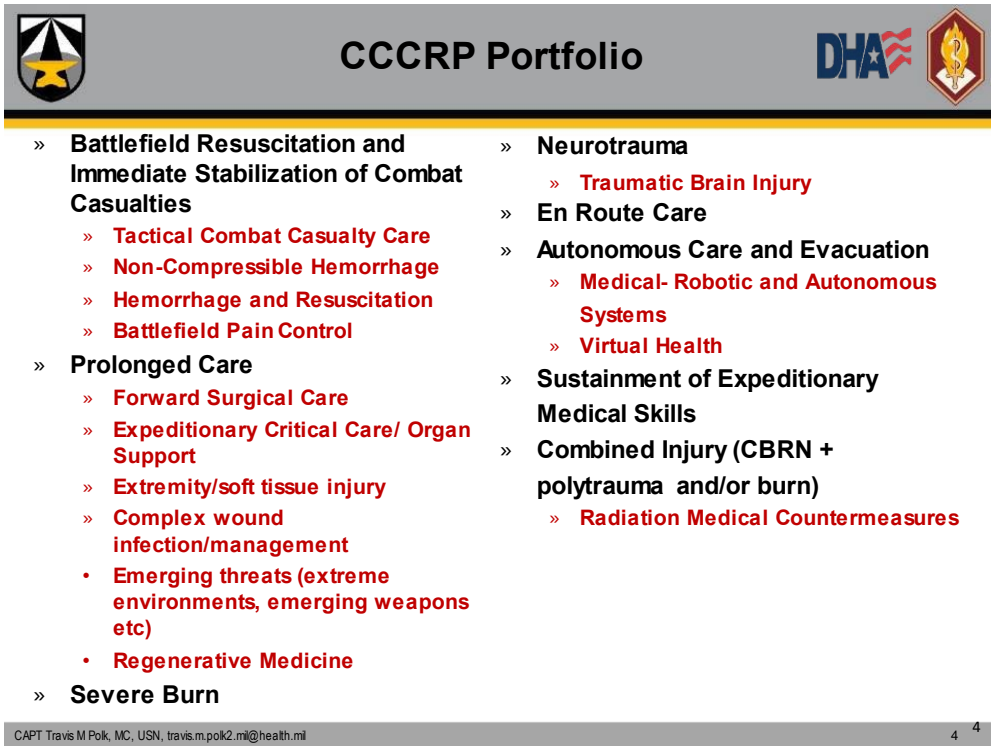
- Few usable host nation medical facilities
- US designed medical infrastructure
- US Doctrine is the basis of medical care
- US Lead Patient Evacuation
- US Facilities provide vast majority of medical care
    - NATO Support
- Theater Medical Command

EUCOM

- Robust host nation medical infrastructure
- Military and civilian medical care is integrated
- US Trauma Care provided primarily by purchased care under steady state
- NATO lead?
- No Theater Medical Command

7). Combat Casualty Care Research Program (CCRP) Update: (CAPT Polk)**:** Our intent is to provide current info and updates to each of the DCoT Committees twice a year on knowledge and materiel products in support of Trauma Care.

CAPT Polk discussed current Portfolio of CCRP:



JTS and DCoT help identify Gaps and define needs but also a recipient of our end products mostly as knowledge products. Based on JCIDS requirements.

CAPT Polk spoke on the Linking Investigation in Trauma & Emergency Services (LITES) Network which creates 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.

Current LITES Studies being conducted:

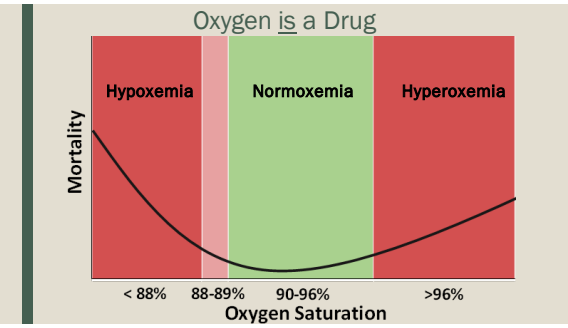
1) Epidemiology of trauma in US / mortality analysis
2) Shock, whole blood and TBI (SWAT) -- Component vs WB for HS and HS+TBI
3) Prehospital Airway Control Trial (PACT)—standard practice vs SGA
4) Cold Stored Platelet Early Intervention (CriSP-HS and CriSP-TBI)
5) Prehospital Analgesia Intervention (PAIN) – IV fentanyl vs ketamine
6) Type O Whole blood and assessment of Age early Resuscitation (TOWAR) --<14day old vs >14day old CSWB
7) Desuvia Early Evaluation of Pain (DEEP) – standard therapy vs SL sufentanil in injured patients
8) Calcium and Vasopressin in Early Resuscitation (CAVALIER)

CCRP Way Forward:

» Routine research updates at DCOT meetings highlighting current studies or development efforts.
  » SAVEO2 study will be highlighted today
» Better process for incorporation of new research findings into JTS/DCOT products, when appropriate

» Opportunities for DCOT members to participate as SMEs for IPTs, steering committees, programmatic panels/proposal reviewers.

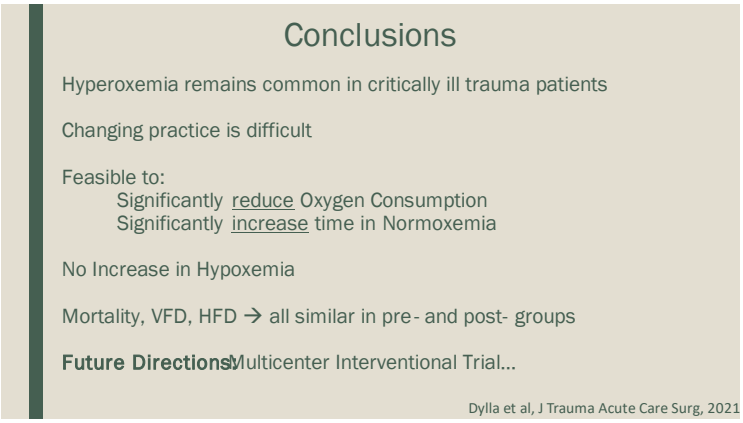
8). SAVE-O2 & Device Study results: (Dr. Ginde): Dr. Ginde presented on the paradigm shift of supplemental oxygen to avoid morbidity from hypoxemia. The history of excessive oxygenation in PFC and ERC, the harm it may cause, the lack of benefit and logistical issues with oxygen tanks and the knowledge gap on limited data of oxygen titrations targets in critically injured patients.



Systematic review of oxygenation and clinical outcomes to inform oxygen targets in critically ill trauma patients

David J. Douin, MD, Steven G. Schauer, DO, MS, Erin L. Anderson, RN, Jacqueline Jones, PhD, RN, Kristen DeSanto, MS, Cord W. Cunningham, MD, MPH, Vikhyat S. Bebarta, MD, *and* Adit A. Ginde, MD, MPH, *Aurora, Colorado*

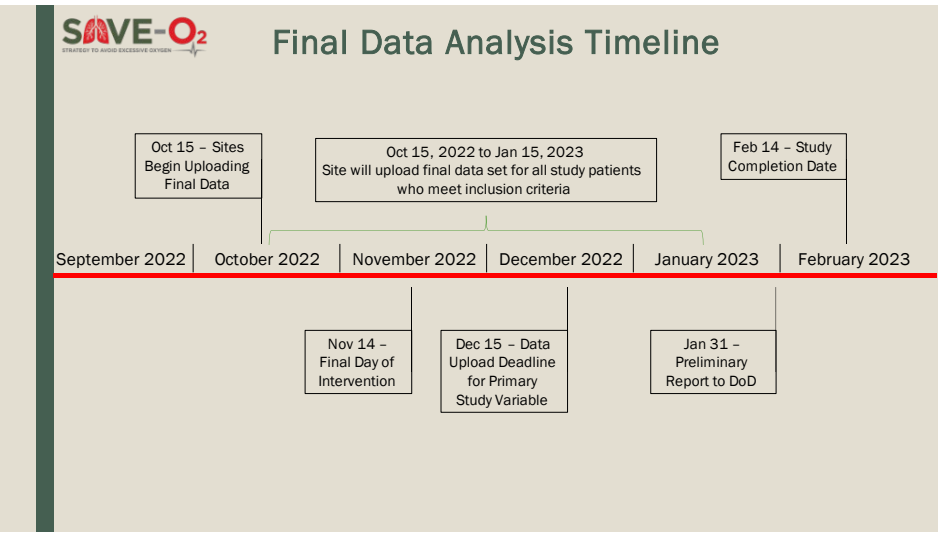
- Design: Pre/Post Observational Pilot Study
  - 12 Months "Pre" and 6 Months "Post" Implementation
- Target: SpO2 90-96% or PaO2 60-100mmHg
- Cohort: Adult Patients with Acute Injury requiring ICU Admission
- Setting: University of Colorado Hospital



Objective: determine feasibility, safety & effectiveness of targeted normoxemia to conserve oxygen and improve clinical outcomes in critically injured patients (polytrauma and burn)

Design: Cluster Randomized, Stepped Wedge Implementation Trial

Human Subjects Issues: Minimal Risk, Waiver of Informed Consent (efficient & saves costs)



- SAVE-O2 is ongoing
  - Enrollment completed in late 2022
  - Initial results in early 2023
  - Final results in spring 2023
- Goal: evaluate targeted normoxemia approach and define oxygen requirements for combat casualty care
  - Safety
  - Effectiveness in reducing need for (high) concentrated oxygen
  - Effectiveness in improving patient outcomes
- Short-term outcomes in polytrauma and burn patients
- Open questions re: autonomous solutions, prehospital implementation, long-term outcomes (esp TBI patients), burn wound oxygenation

Dr. Ginde *– Seems like what acquisition wants to know is what proportion of patients from a certain injury pattern needs none or a certain oxygenation pattern…adequately with less than 4-6 liters…it's never going to be 100%, but it will be extremely rare to hit these targets. This was meant to be a knowledge product, but of course secondarily to inform acquisitions.*

Dr. Ginde *– 85% was the target when we questioned the expert panel to prevent hypoxemia. It might be a good, better, best type decision.*

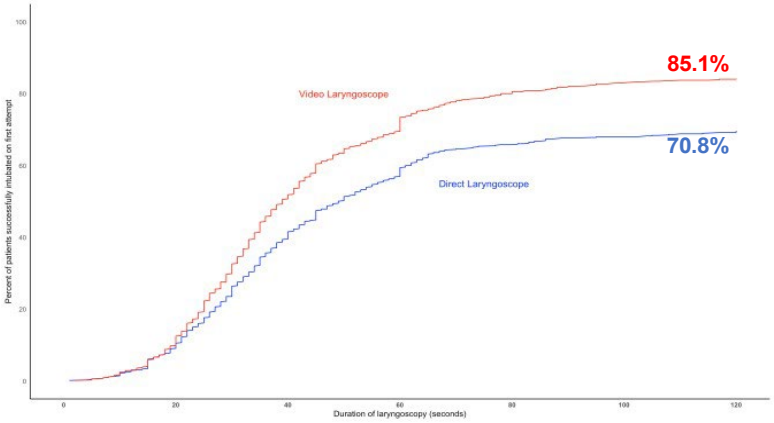
Dr. Ginde then presented on the results ready for publication on the use of Direct vs Video Laryngoscopy. Failure to intubate on first attempt is associated with increased risk of complications.

- **Direct**
  - Requires skill to obtain an adequate view, particularly in anatomically difficult situations
  - Easy to pass the endotracheal tube once a good view is obtained
- **Video**
  - Easier to obtain a good view even in difficult situations
  - Can be harder to pass the endotracheal tube even with a good view
  -

RESULTS

DEVICE
DirEct versus VIdeo laryngoscOpE trial

Figure 1. Primary outcome by duration of laryngoscopy

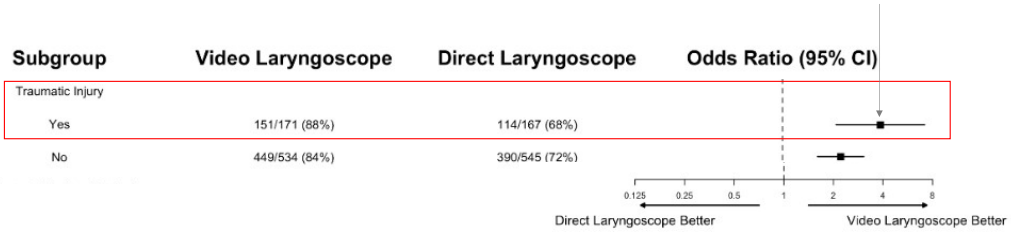


Highlighting the Military Relevance on success rate with Video vs Direct Laryngoscopy in Traumatically Injured Patient.

Military Relevance

Traumatic injury

Using a VL may be even more effective in patients with trauma



The discussion concluded with talk of CPG implication and the use at POI in austere environments. Although Video has proven success rates, the applicability in remote/austere POI environments may not lead to implementation from capability developers. The study was well received and commended for their in-depth analysis and study structure.

COL Schreiber *– This is going to be a game changer for patient management. This is going to require a cultural mindset shift.*

Dr. Ginde *– we are now conducting a study on video laryngoscopy proficiency vs. standard, and I hope to brief on that at your next meeting.*

WG Brief Backs:

Non-surgeons performing surgery (CDR Jensen/SCPO Scarborough)

> ***CDR Jensen*** *– Position paper is the best way ahead after much discussion. We are going to be careful about being overly prescriptive. Decision making being the most important thing to focus on, but some "surgical procedures" would be feasible and appropriate to save life and limb. So our goal is to land in two big buckets, stop hemorrhage (TCCC) where to draw the line with surgical intervention, and address the training gap with surgical debridement etc. Getting them to the Role 2, time is your triage tool, and if you're "planning for PCC" you're planning improperly.*
>
> ***CAPT Tadlock*** *– where do we draw the line with surgical training intervention, and we should focus on the decision-making process, is this patient expectant and are we exhausting resources in an untenable situation?*
>
> ***COL Schreiber*** *- Take the surgeon/non-surgeon lexicon out of it…we say Role 1 environment, surgeon or not should not be operating on any patient because we don't have the resources to conduct those types of procedures because you can do more harm and the patient is going to die.*
>
> ***SCPO Scarborough*** *– the point of PCC is due to a failure of evacuation, and you are required to sit on a patient longer than anticipated. This must be made clear that this is an untenable situation, and we have to be clear we do not message this to Operational Commanders because they will think they have a "surgical capability."*
>
> ***Lt Col Sams*** *- do we just need to remove the word "surgery?" Do we need to address this or not, was it just a CENTCOM issue that has died on the vine.*
>
> ***CAPT Polk*** *– We must put it in terms of "what surgical procedures could or should be done by a non-surgeon" not just Medics but GMO, OBGYN, all those providers deployed in situations that are outside their traditional comfort zone. The point is for us to identify what is "ok" for us to say these things can be done without increasing mortality.*

ARSC OPG Update: (Paul Allen/Dan Mosely): Adjudication of the document took place in the WG and a 98% solution has been reached. A final document will be produced in the next 2 weeks. I just need to accept all track changes, format grammar etc. Everyone in this room has access to this Google Doc…please read through it again and make any last-minute comments etc before I adjudicate.

> ***Dr. Mosely*** *- First thing first, I have put a definitive date to get the finished product out by 15 May 2023. We want this to be more like a handbook, not a huge PDF document that is overwhelming.*
>
> ***CAPT Tadlock*** *– can we tie "Lessons Earned" into the handbook title somehow?*
>
> ***Dr. Mosely*** *– One challenge is where do we put this, where do we publish this to get it out there. Borden institute seems to be the logical, free, but prolonged process. Immediate accessible, not peer reviewed, but Deployed Medicine and JTS website seems most appropriate. Also, Executive Summaries to JATACS, MILMED etc. to reach audiences outside the people in this room or in the JTS/DHA, but the entire DoD.*
>
> ***Col Shackelford –*** *Does this belong in the EWS book, it is possibly one of our widest reaching publications, it's in Ukrainian etc. The main objective is to not let it turn into a doorstop. The only downside would be that it gets lost in dissemination since EWS has already been widely distributed.*

Discussion: Proposal for dates for Fall CoSCCC. Mid to end of August, with INDOPACOM focus. Global Health Engagement in INDOPACOM. Topics for Position statements for 2024.

> ***CAPT Tadlock*** *- Should we focus on a GME "excelsior like webinar" focusing on procedures, care, clinical issues etc. as part of Day 2 of the CoSCCC?*
>
> ***COL Gurney*** *– Advertising to residents, opening the meeting up virtually to the masses is a huge lift and I don't know if the planning would be worth the squeeze.*
>
> ***CAPT Polk*** *– I think that's the wrong focus, we need to maintain the integrity and prestige of the Membership and produce a formal EXSUM and a Senior Leader Out brief. What actionable deliverables come out of these meetings.*
>
> ***CAPT Tadlock*** *– What should the next Position Statement be? We have a plan for the non-surgeons performing surgery…do we need a future topic for 2024 Position Statement?*
>
> *-Current threats to Readiness & Manning*
> *-Systems, how we staff, grow, develop Systems*
> *-TPM, TMD training to do PI*
> *-Austere Critical Care Concept (lack of CCRN Specialty)*
> *-What does FOC look like for CTS (already being done by JTS CTS Branch)*

Meeting Adjourned at 14:30

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Matthew Tadlock, MD, FACS
CAPT, MC, USN
Chair, Committee on Surgical Combat Casualty Care

JENSEN.SHANE.DAVID.1259064119 Digitally signed by JENSEN.SHANE.DAVID.1259064119 Date: 2023.06.05 09:07:23 -05'00'

Shane Jensen, MD, FACS
CDR, MC, USN
Chair, Defense Committees on Trauma

Enclosure (1) – Meeting Attendance

JTS Staff:

COL Jennifer Gurney (DCoT Chief)
Mr. Dallas Burelison (JTS Chief Administrator)
CDR Shane Jensen (DCoT Chair)
COL Brian Sonka (PI Chief)
Cord Cunningham (ERCCC Chair)
CAPT Brendon Drew (CoTCCC Chair)
CAPT Matt Tadlock (CoSCCC Chair)
LTC Chris Graybill (JTET Branch Chief)
Lt Col Lindsay July (PI)
COL Jay Baker (CTS Branch Chief)
LtCol Andrew Rhorer (AFMES)
CDR Brenda Williams (Senior Nurse)
HMCM Justin Wilson (Senior Enlisted Advisor)
Harold Montgomery (TCCC PM)
Dominick Sestito (SCCC PM)
Danielle Davis (CoTCCC Admin)
Ed Whitt (Pubs)
Dr. Russ Kotwal (Spec Projects)
Dr. Sean Keenan (JTET Spec Proj)
Dr. Mary Ann Spott (ASBP)
Trevor Gipper (A/V Spec)
Curtis Hall (Pubs)
Larry Crozier (PI)
Linda Martinez (PI)
Laura Runyan (PI)
Dr. Kenneth Leffler (PI)
Teresa (Teri) Duquette-Frame (PI)
Caryn Stern (Epi Stats)
Janet Lafauci (Registry)
Jonathan Stallings (Data)
Dr. Dan "Tre" Mosely (JTET)
Phil Sartin (Registry)

CoSCCC Attendance

Adam Spinner
Adit Ginde (Guest Speaker)
MAJ Alex Merkle
COL Andre Cap
SFC Andrew Proctor
LTC Brad Rittenhouse (Guest Speaker)
Lt Col Brent Feldt
Dr. Brian Eastridge
LCDR Brittany Hout
Lt Col Charla Geist (Guest Speaker)
LTC Chris Mahoney
LTC Christopher Moon
LTC Dave Hardin
Mr. Derek Licina (Guest Speaker)
Donald Adams
Dr. Donald Marion
LTC Emily Hathaway
LTC Erik Roedel
Col Jay Sampson
CDR Jay Yelon
CAPT Joe Kotora
Dr. John Fildes
Dr. John Holcomb
CDR John Maddox (Guest Speaker)
Kathleen Martin
COL Kirby Gross
COL Lance Cordoni
COL Linda Benavides
Luis Diolazo
COL Martin Schreiber
Lt Col Mary Stuever
MAJ Michael Clemens
1SG Mike Remley

CAPT Michael Tripp (Guest Speaker)
Maj Nathan smith (Australian)
COL Pamela Dipatrizio
Paul Allen
Dr. Peggy Knudson
Maj Rachel Russo (Guest Speaker)
LCDR Rebecca Rausa
LTC Rich Lesperance
Maj Richard Betzold
Dr. Robert Winchell
COL Sandra Wanek
LTC Shaun Brown
Col Stacy Shackelford
CAPT Ted Edson
CAPT Travis Polk (Guest Speaker)
SCPO Tyler Scarborough
LTC Wendy Warren
LTC Val Sams
CAPT Virginia Blackman
CAPT Glenn Bradford
Tamara Averettbrauer
COL James Oyekan

CoSCCC Virtual Attendance

COL Jason Seery
COL Jamie Riesberg (Guest Speaker)
COL Eric Van Fosson
LCDR Doug Pokorny
CDR Jack Brandau
COL Scott Armen
COL John Detro
Dr. John Oh (Guest Speaker)
Col Dan Cox
Col Brian Gavitt
Dr. Dmytro Samofalov (Ukraine)
COL Jason Corley
Peter Kalamaras
COL Jeremy Cannon
CDR Tony Torres
COL Jeffrey Lanier
MAJ Hillary Battles
Lt Col Thomas Brockmann
Lt Col Regan Lyon
CDR Paul Porensky
LTC Cleve Sylvestre
Col Sarady Tan
Lt Col Andrew Hall
Inessa Khaline