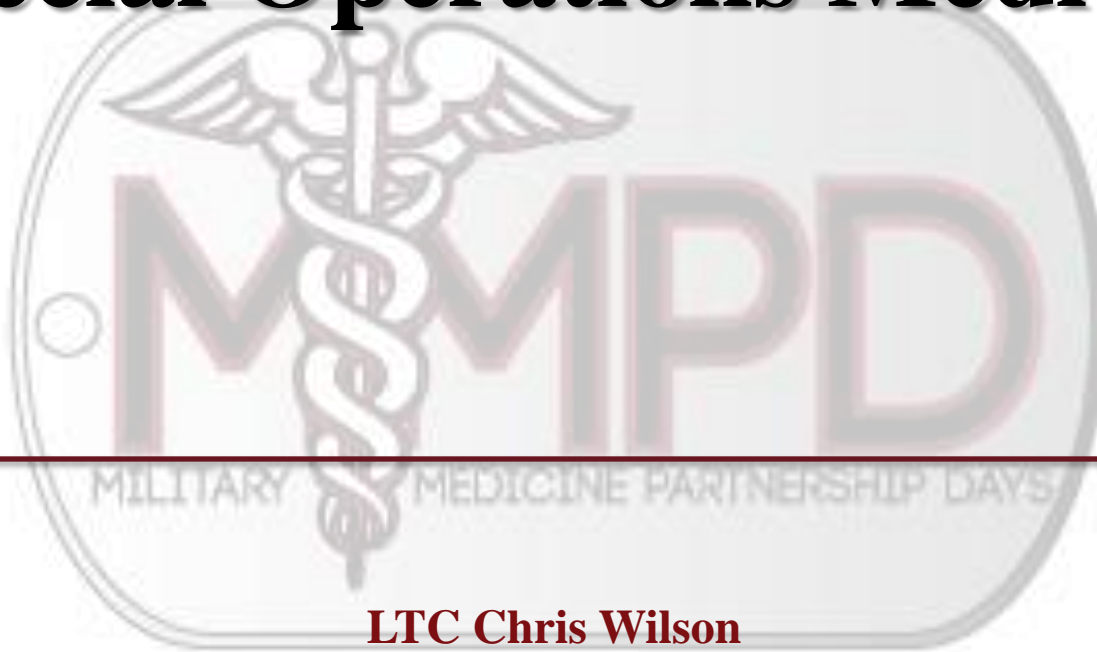




Special Operations Medicine



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**Office of the Command Surgeon
US Special Operations Command
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Panel Members



- SGM F Bowling – HQ USSOCOM
 - (Medical Simulation and Training)
- LtCol Rebecca Carter - AFSOC
 - (Portable Diagnostics)
- HMC Courtney Lust - MARSOC
 - (Pre-Hospital/TCCC)
- LTC Jamie Riesberg – JSOMTC
 - (Prolonged Field Care)
- MAJ Rebecca Baxter - USASOC
 - (Canine Medicine / Performance)



The views expressed in this presentation are those of the author(s) and may not reflect the official policy or position of the US Special Operations Command, Department of Defense, or the U.S. Government.



Purpose



To enhance industry understanding of Special Operations Medicine and Current Technology Gaps.

- Research Areas of Interest

- *Medical Simulation and Training*
- *Portable Diagnostics*
- *Pre-Hospital/Tactical Combat Casualty Care*
- *Prolonged Field Care*
- *Canine Medicine / Performance*



- *Research / Collaboration Opportunities*

- *Annual Broad Agency Announcement(s)*
- *Technology & Industry Liaison Office (TILO)*
- *Small Business Innovation Research (SBIR)*
- *Cooperative Research and Development Agreement (CRADA)*





Research Areas of Interest



- Medical Simulation and Training Technologies
- Portable Lab Diagnostics
- Damage Control Resuscitation/TCCC
- Prolonged Field Care
- Canine Medicine/Performance
- Force Health Protection and Environmental Medicine
- Human Performance

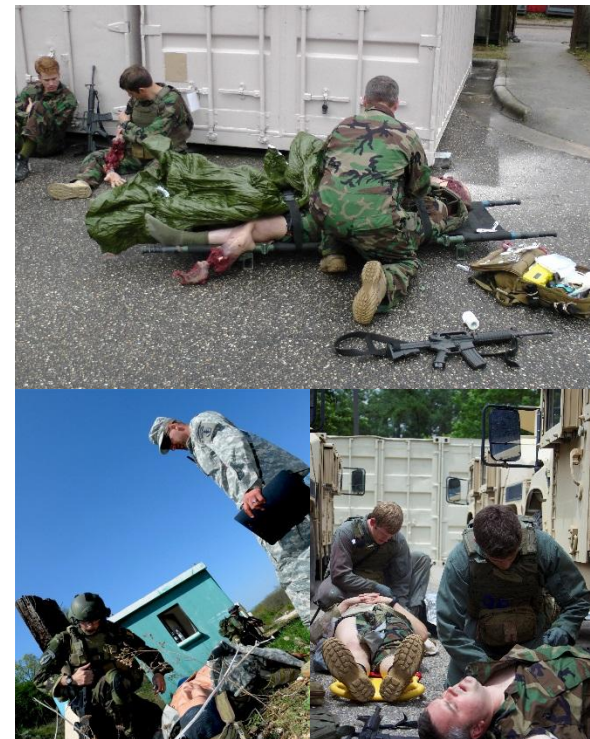




Medical Simulation and Training



1. Pre-Hospital Focus
2. Advanced Trauma Task Training Models
3. Cognitive Behavioral Approach
4. Ruggedized / Suitable for Field Use





Portable Lab Diagnostics



1. Portable and Environmentally Stable

1. Multiple Capabilities and Sample Types
2. Simple Sample Preparation



2. Biological / Clinical Diagnostics

1. Diseases of Operational Significance (Malaria, Typhoid, Dengue Fever, etc.)
2. Blood Chemistry Analysis



3. Occupational and Environmental Health Hazards: Industrial contaminants, food borne pathogens, toxins, agents, and biological material exposures.





Pre-Hospital/TCCC



“GOOD MEDICINE...BAD PLACES”

- Starts with, but is not all inclusive to Care Under Fire
- Overlap with all other research areas of interest





Pre-Hospital / TCCC



1. Global Treatment Strategies: hypotensive resuscitation, optimal fluid(s), uncomplicated shock, non-compressible hemorrhage, traumatic brain injuries
2. Analgesia: Simple administration in the field, tolerance of extreme environments. Maximum analgesia w/ minimal sedation.
3. Far Forward Blood, Blood Components, & Injectable Hemostatics
4. Austere Surgical Stabilization



Prolonged Field Care



Tyranny of
Distance =
"Loss of
Strength
Gradient"



1. Management of a critical patient, or multiple serious patients, in an austere environment over extended period of time
2. Beyond doctrinal planning time-lines; limited resources
3. Focused on austere environment with delayed or no evacuation/surgical support
4. Research directed at biology and physiology associated with lack of definitive care or surgery (eg, Crush, TQ conversion)
5. Improved safety of Fresh Whole Blood Transfusion, advanced diagnostic or resuscitation techniques





Prolonged Field Care Capabilities



- 10 Capabilities:
 - **Monitor** the patient
 - **Resuscitate** the patient
 - **Ventilate/oxygenate**
 - Maintain an **airway**
 - **Sedation/pain control**
 - **Physical Exam/diagnostic measures**
 - Provide **nursing/hygiene/comfort** measures
 - Perform advanced **surgical interventions**
 - **Telemedicine**
 - Prepare the patient for **flight**



Photo By: Kyle J. O. Olson

TCCC ("Ruck")

CASEVAC
("Truck")

PATIENT HOLD
("House")

MEDEVAC
("Plane")



Canine Medicine/Performance



- There are three main jobs for military working dogs: detection, patrol, and tactical.





Canine Medicine / Performance



1. Exposure to Environmental Extremes
2. Sensory Optimization and Protection
3. Trauma Resuscitation
4. Non-Traditional Anesthesia Protocols
5. Optimization of Canine Performance & Nutrition
6. Pre & Post Trauma Training / Behavioral Issues





Questions?



For additional questions specific to USSOCOM after the conclusion of the conference, send an email message to:

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or

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