MILITARY HEALTH SYSTEM
Strategic Partnership

OVERVIEW: MHSSPACS

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Medical Director
Disclosure:

M. Margaret Knudson has the following financial or non-financial interest to disclose:

- On Contract with the ACS to support this Partnership
- No discussion of products will be made in this presentation.

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Learning Outcomes:

1. Discuss the criteria and processes necessary to initiate a Mil-Civ partnership - UAB Experience
2. Avoid dangerous pitfalls which could derail a program’s initial success
3. Set up a program for sustainability and long-term success
4. Discuss impact of Mil-Civ Partnership on residency and fellowship training and how to avoid issues
5. Discuss outreach opportunities and benefits of having a Mil-Civ Partnership in place
History of MHSSPACS

Established in 2014: Clinical Congress

Purpose: DOD-ACS Information Exchange in:

- Surgical Quality
- Surgical Education
- Trauma Systems
- Trauma Research

POM Funding (President’s Budget): $700k/year
Quality Initiative

**Goal:** Develop a Military NSQIP Consortium

**Accomplishments to Date:**
- All MTS now participate in NSQIP
- Semi-annual meetings: SC/SCRs
- 7 MTS: top NSQIP performers
- High Visibility within Defense Health Board*

*US News and World Report 5/23/2019*
Quality Initiative

• First official “Quality Site Visit”: WRNMMC
• Using RED BOOK criteria for verification
• MHS Scientific Publication: Health Affairs Journal

Future Plans:

• Continue to refine: Annual Military Consortium meetings at ACS to meet the needs of MTF
• Expand Quality consultation/verification visits
ACS NSQIP

DOD Collaborative January 2019 Summary

Surgery Dates July 1, 2017 to June 30, 2018

The following table displays risk-adjusted collaborative performance for the current SAR period using the risk-adjusted smoothed rates methodology.

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Total Cases</th>
<th>Observed Events</th>
<th>Observed Rate</th>
<th>Adjusted Rate *</th>
<th>95% Lower CL</th>
<th>95% Upper CL</th>
<th>Outlier **</th>
<th>Estimated OR</th>
<th>Population Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALLCASES Mortality</td>
<td>40,683</td>
<td>56</td>
<td>0.14%</td>
<td>0.61%</td>
<td>0.44%</td>
<td>0.80%</td>
<td>Low</td>
<td>0.61</td>
<td>0.99%</td>
</tr>
<tr>
<td>ALLCASES Morbidity</td>
<td>40,683</td>
<td>932</td>
<td>2.29%</td>
<td>5.30%</td>
<td>4.96%</td>
<td>5.65%</td>
<td>Low</td>
<td>0.87</td>
<td>6.03%</td>
</tr>
<tr>
<td>ALLCASES Cardiac</td>
<td>40,683</td>
<td>36</td>
<td>0.09%</td>
<td>0.33%</td>
<td>0.21%</td>
<td>0.48%</td>
<td>Low</td>
<td>0.52</td>
<td>0.63%</td>
</tr>
<tr>
<td>ALLCASES Pneumonia</td>
<td>40,679</td>
<td>81</td>
<td>0.20%</td>
<td>0.64%</td>
<td>0.48%</td>
<td>0.81%</td>
<td>Low</td>
<td>0.66</td>
<td>0.96%</td>
</tr>
<tr>
<td>ALLCASES Unplanned Immolation</td>
<td>40,683</td>
<td>45</td>
<td>0.11%</td>
<td>0.43%</td>
<td>0.30%</td>
<td>0.58%</td>
<td>Low</td>
<td>0.60</td>
<td>0.70%</td>
</tr>
<tr>
<td>ALLCASES Ventilator &gt; 48 Hours</td>
<td>40,677</td>
<td>45</td>
<td>0.11%</td>
<td>0.47%</td>
<td>0.33%</td>
<td>0.63%</td>
<td>Low</td>
<td>0.64</td>
<td>0.73%</td>
</tr>
<tr>
<td>ALLCASES VTE</td>
<td>40,683</td>
<td>133</td>
<td>0.33%</td>
<td>0.69%</td>
<td>0.57%</td>
<td>0.81%</td>
<td>Low</td>
<td>0.85</td>
<td>0.81%</td>
</tr>
<tr>
<td>ALLCASES Renal Failure</td>
<td>40,675</td>
<td>37</td>
<td>0.09%</td>
<td>0.32%</td>
<td>0.21%</td>
<td>0.44%</td>
<td>Low</td>
<td>0.68</td>
<td>0.46%</td>
</tr>
<tr>
<td>ALLCASES UTI</td>
<td>40,631</td>
<td>257</td>
<td>0.63%</td>
<td>1.13%</td>
<td>1.00%</td>
<td>1.26%</td>
<td>Low</td>
<td>1.07</td>
<td>1.05%</td>
</tr>
<tr>
<td>ALLCASES SSI</td>
<td>40,545</td>
<td>431</td>
<td>1.06%</td>
<td>2.17%</td>
<td>1.96%</td>
<td>2.39%</td>
<td>Low</td>
<td>0.86</td>
<td>2.50%</td>
</tr>
<tr>
<td>ALLCASES Sepsis</td>
<td>40,630</td>
<td>92</td>
<td>0.23%</td>
<td>0.68%</td>
<td>0.53%</td>
<td>0.85%</td>
<td>Low</td>
<td>0.70</td>
<td>0.97%</td>
</tr>
<tr>
<td>ALLCASES C.diff Colitis</td>
<td>40,683</td>
<td>31</td>
<td>0.08%</td>
<td>0.23%</td>
<td>0.14%</td>
<td>0.34%</td>
<td>Low</td>
<td>0.60</td>
<td>0.39%</td>
</tr>
<tr>
<td>ALLCASES ROR</td>
<td>40,683</td>
<td>586</td>
<td>1.44%</td>
<td>2.65%</td>
<td>2.45%</td>
<td>2.85%</td>
<td>High</td>
<td>1.13</td>
<td>2.35%</td>
</tr>
<tr>
<td>ALLCASES Readmission</td>
<td>40,683</td>
<td>1,049</td>
<td>2.58%</td>
<td>5.25%</td>
<td>4.96%</td>
<td>5.56%</td>
<td>High</td>
<td>1.05</td>
<td>5.04%</td>
</tr>
</tbody>
</table>
Education Initiative

Goal: Develop a standard, validated testing and training platform for deploying surgeons

Accomplishments To Date:

• Defined the KSA for the Expeditionary/far forward surgeon using JTS CPGs and DODTR data
• Developed 2 versions of a beta test (200 questions)
• Distributed the test to over 100 surgeons using ITS
• Dedicated PhD level psychometrician
• Analysis: test can discriminate: experience
# Education Retreat: Blueprint

<table>
<thead>
<tr>
<th>Wound &amp; Amputation /Fx Mgt</th>
<th>Head and Spine Injury</th>
<th>Torso Trauma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of War Wounds</td>
<td>Cervical and TL Spine Injury</td>
<td>Pelvic Fracture Care</td>
</tr>
<tr>
<td>Compartment Syndrome and Fasciotomy</td>
<td>Concussion/mTBI Management</td>
<td>Blunt Abdominal Trauma</td>
</tr>
<tr>
<td>Amputation</td>
<td>Neurosurgical Management</td>
<td>Damage Control Surgery (ABD)</td>
</tr>
<tr>
<td>Burn Care</td>
<td>Cervical Spine Evaluation</td>
<td>Damage Control Surgery (Chest)</td>
</tr>
<tr>
<td>High Bilateral Amputations</td>
<td>Management of Severe Head Injury</td>
<td>Damage Control Surgery (Neck)</td>
</tr>
<tr>
<td>Extremity Trauma/Hands and Feet</td>
<td></td>
<td>Thoracic Trauma</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wartime Vascular Injury</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transfusion and Resuscitation</th>
<th>Critical Care/Prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen Blood</td>
<td>Hypothermia Prevention</td>
</tr>
<tr>
<td>Damage Control Resuscitation</td>
<td>Prevention of Venous Thromboembolism</td>
</tr>
<tr>
<td>Fresh Whole Blood</td>
<td>Catastrophic Care</td>
</tr>
<tr>
<td>Inj Doc Resus Record</td>
<td>Infection Control</td>
</tr>
<tr>
<td>REBOA for Hemorrhagic Shock</td>
<td>Management of Pain/Angst/Del</td>
</tr>
<tr>
<td>Emergency Thoracotomy</td>
<td>Critical Care additional</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expeditionary Unique</th>
<th>Airway and Breathing</th>
<th>Universal Domains</th>
</tr>
</thead>
<tbody>
<tr>
<td>UXO Management</td>
<td>Trauma Airway Management</td>
<td>Systems Based Practice</td>
</tr>
<tr>
<td>TCCC/Prehospital Care</td>
<td>Acute Respiratory Failure</td>
<td>Practice Based Learning and Improvement</td>
</tr>
<tr>
<td>EPW &amp; Detainee Care</td>
<td>Trauma Anesthesia</td>
<td>Interpersonal and Communication Skills</td>
</tr>
<tr>
<td>Pediatric Trauma</td>
<td>Inhalational Injury</td>
<td>Professionalism</td>
</tr>
<tr>
<td>Intratheater Transport</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Mgt of Mil Working Dogs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Domains for Assessment**

- Critical Care/Prevention
- Hypothermia Prevention
- Prevention of Venous Thromboembolism
- Catastrophic Care
- Infection Control
- Management of Pain/Angst/Del
- Critical Care additional
MOC-squared

Matriculation into Military Health System

Assessment of Knowledge, Skills, and Abilities (3 year reassessment)

No KSA Deficit

Individualized Training Developed from Assessment Results

KSA Deficit

No KSA Deficit

DEPLOYMENT READY

Pre-deployment

KSA Deficit

Trauma Training Platform

Active Surveillance and Refinement

Diagram of Military Surgery Maintenance of Competency and Currency
Education Initiative

- ASSET-Plus beta course: UM/Mark Bowyer
- Perfused cadavers/several simulators
- Alligned with the “S” of the KSA for expeditionary surgeons
Education Initiative: M Curriculum

• Aligned curriculum for just in time learning
• Subject specific based KSA
• Delivered via ACS on-line ETHOS system
• Several modules/storyboards completed
These are screenshots from the first module that was built, we will have 3 built by July.
Education Initiative

**Future plans:**

- Develop KSA for Deploying Trauma Surgeons
- Develop KSA for Surgery Specialists
- Complete the M-Curriculum modules
- **KSA project mentioned by New Sec-Defense**
Trauma Systems Initiative

• **Goal:** To Sustain the Joint Trauma System as outlined in the National Defense Authorization Act 2017

• Major MTFs to participate in local trauma system or develop partnerships with civilian trauma centers

• Addresses needs of 45M in US-no access in 1 hour

• Augments response to mass casualty/

• and disaster events
### Trauma Initiative: Military Tx Centers

<table>
<thead>
<tr>
<th>Name</th>
<th>Verified ACS Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brooke Army Medical Center</td>
<td>1</td>
</tr>
<tr>
<td>Dwight Eisenhower AMC</td>
<td>Pursuing level 3</td>
</tr>
<tr>
<td>Fort Belvoir</td>
<td>Pursuing level 3</td>
</tr>
<tr>
<td>Landstuhl RMC</td>
<td>3</td>
</tr>
<tr>
<td>Mike O’Callaghan MMC</td>
<td>Pursuing level 3</td>
</tr>
<tr>
<td>Naval Med Center Lejeune</td>
<td>3</td>
</tr>
<tr>
<td>Tripler AMC</td>
<td>2</td>
</tr>
<tr>
<td>WRNMMC</td>
<td>2</td>
</tr>
<tr>
<td>Womack Army Med Center</td>
<td>3</td>
</tr>
</tbody>
</table>

**Future:** Work with DHA in Developing Military-Civilian Partnerships
Facilitate DODTR---NTDB---TQIP Integration
Perform a Needs Assessment—local trauma area
Trauma Systems Initiative

- Two Military-Civilian (MCP) Partnership Meetings
- Proceeds published in JACS
- "Blue Book" created (draft form) for selection and evaluation criteria for MCP
- Submitted to DHA----Secretary of Defense
- Supported the Mission Zero/PAHPIA-2019
- Provides grant support for MCP
- $1M/year: CCC team
- $100,000/year: physician
- $50,000/year: allied health practitioner
“Blue Book” Criteria for MCP:

- **Commitment**: Highest Level: Dean/COE
- **Administrative**: Oversight/authority
- **Personnel**: Faculty/ Civilian Surgeon Champion
- **Physical Resources**: Case load/mix; facilities
- **Education**: curriculum/graduated authority
- **Evaluation**: CME/KSA/budget/faculty
Trauma Research

**Goal:**
- To conduct multi-center trauma research of interest to the military

**Progress to Date:**
- Secured major DoD grant for multi-center research project of military relevance (CLOTT)
- Set up infrastructure through NTI/CNTR
- Currently 5 MRMC grants at NTI/CNTR

**Future:** Work with Dr. Bulger/COT on NTRAP
Excelsior Surgical Society

Rebirth of Society from 1945-1980s
Official Society with ACS: 258 members
Full day of meetings in conjunction with CC
Serves as home for active duty, reserve/retired military surgeons/med students/residents