

### WORKING IN THE THE WORLD OF GHOST-Ts

Operation Resolute Support



COL T.S. WOLL, M.D.  
ORTHOPEDIC SURGEON (61M) - 1<sup>ST</sup> GHOST-1/10<sup>TH</sup> SPECIAL FORCES GROUP  
KANDAHAR AFGHANISTAN

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### OBJECTIVES

- REVIEW ELEMENTS OF MILITARY MEDICAL MISSION, PRESENT MY EXPERIENCE AND LESSONS LEARNED

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**AFGHANISTAN**

POPULATION: 35 MILLION  
AREA: 252,000 SQ MI (SIZE OF TEXAS)  
GDP: \$70 BILLION/YR, GDP PER CAPITA- 596, (US- 55671)  
CURRENCY: AFGHANI, EX- 71.5 TO 1USD  
LANGUAGES: PASHTO, DARI  
14 ETHNIC GROUPS- PASHTUN (42%), TAJIK (20%), HAZARA (10%)  
MAIN EXPORT: OPIUM- 90% OF WORLDS SUPPLY, EMPLOYS 400,000,  
MORE THAN AFGHAN NATIONAL SECURITY FORCES

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**NUMBER ONE CASH CROP**



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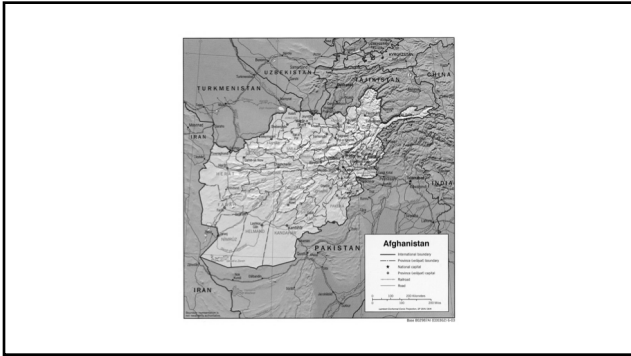
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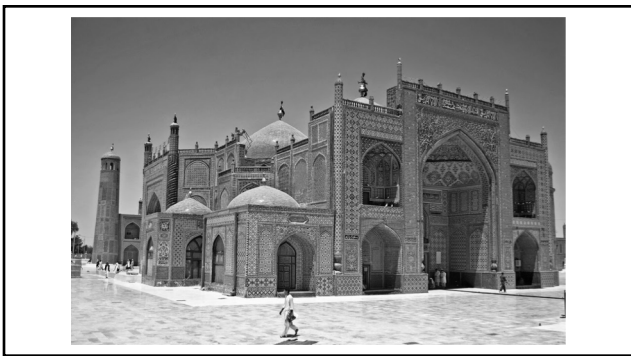
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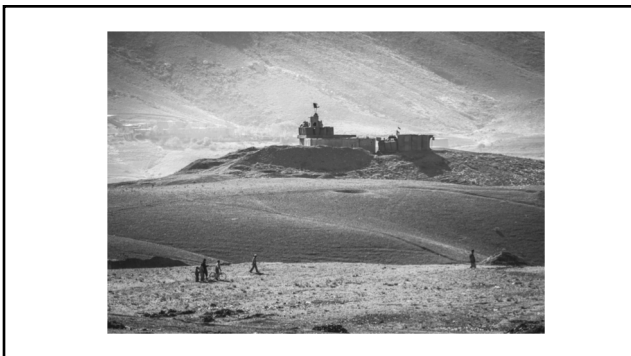
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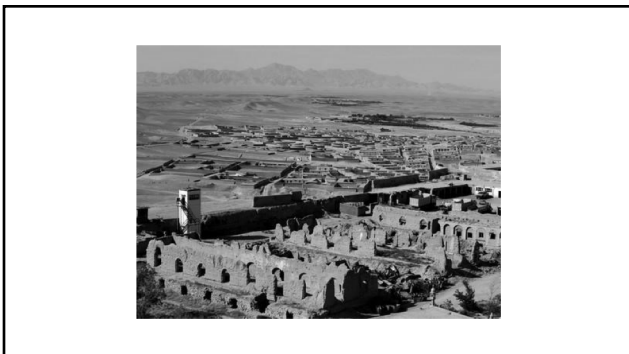
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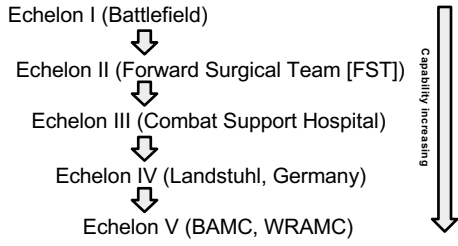
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### ECHELONS OF CARE



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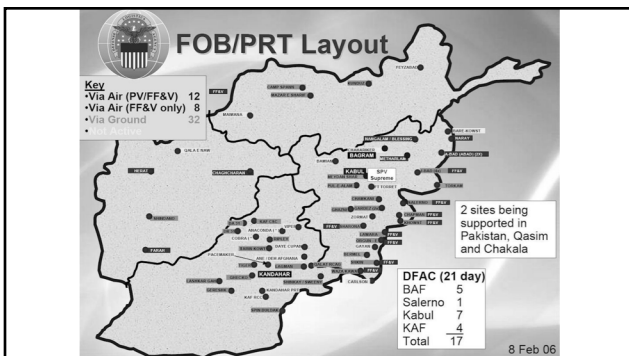
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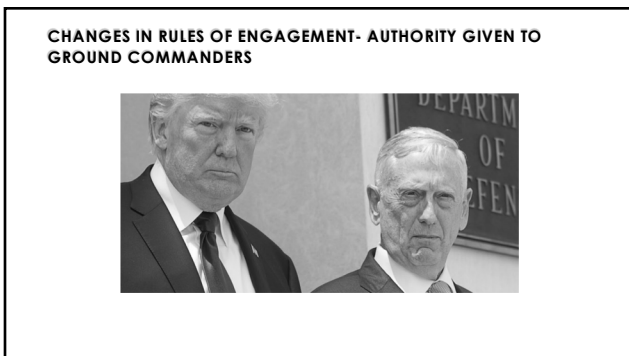
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GOAL TO BRING THE TALIBAN  
INSURGENT LEADERS TO THE  
NEGOTIATING TABLE

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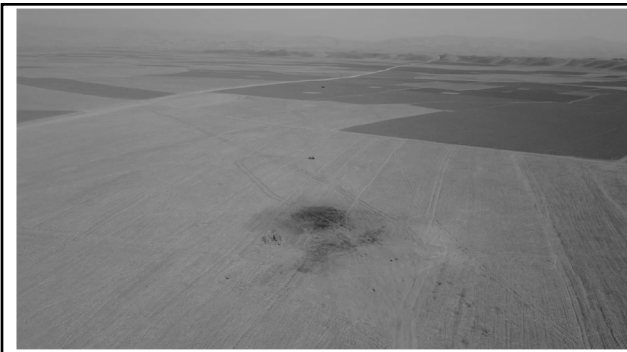
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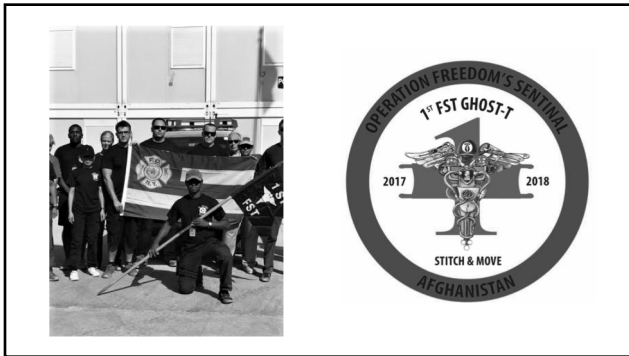
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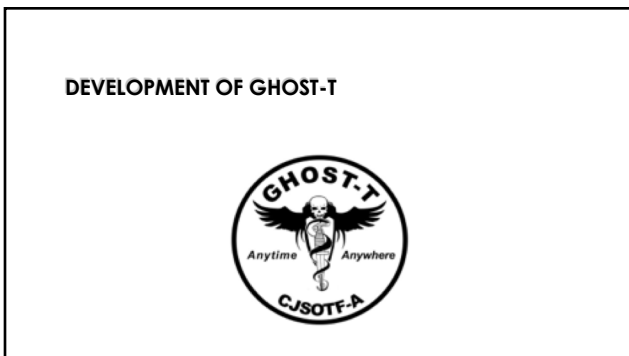
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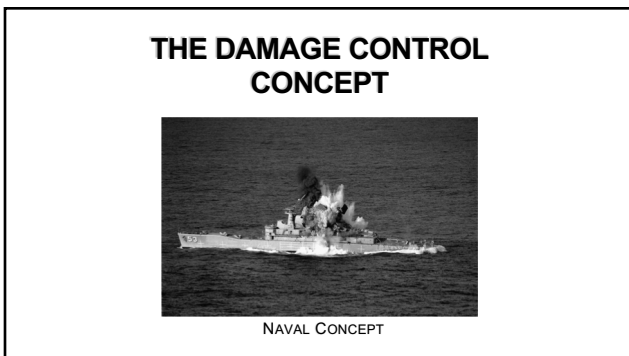
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## OLD PARADIGM

- AGGRESSIVE IVF
- AGGRESSIVE OPERATIONS
- DEFINITIVE MANAGEMENT
- LONG PROCEDURES




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## NEW PARADIGM

- DAMAGE CONTROL RESUSCITATION



- DAMAGE CONTROL SURGERY

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## GHOST-T MISSION STATEMENT

- EIGHT-MEMBER EXPEDITIONARY SURGICAL TEAM TO PERFORM RESUSCITATIVE SURGERY ESSENTIAL TO STABILIZE SEVERELY INJURED PATIENTS AND PROVIDE CONTINUOUS STABILIZATION TO SAFELY EVACUATE TO THE NEXT HIGHER LEVEL OF APPROPRIATE MEDICAL CARE IN ORDER TO INCREASE THE FLEXIBILITY OF THE WARFIGHTER OUTSIDE OF THE THEATER ORGANIC "GOLDEN HOUR" MEDICAL EVACUATION RANGE.

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**STAFFING**

**Two Surgeons (61J or 61M)**  
 Secondary function: First Assist, ATLS and Critical Care

**Two Certified Registered Nurse Anesthetist (66F)**  
 Secondary function: Critical Care Nurse/ First Assist

**Two OR Technician (68D)**  
 Secondary function: NCOIC/First Assist /CMS/Admin

**One Medic (68W/C)**

**One Supplementary Personnel (68W/C/66H/70B)**  
 Secondary function: NCOIC/Circulating Nurse/Comms/Admin

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**GHOST-T PACKAGE**

Fixed structure ~vs.~ tent or austere environment  
 Nearest Role III/Role II and MEDEVAC location (PACE plan)



Less than 3 days: Light package  
 More than 8 days: Heavy package

Less than 300 PAR: Light package  
 More than 300 PAR: Heavy Package

\*\*\*Varies depending on mission requirements\*\*\*

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### GHOST-T OPERATIONS



- Capable of placing a surgical asset whether in an austere or fixed environment.
- GHOST Light packet consists of one razor, one surgical equipment package, supplies and blood necessary to treat up to five patients (one surgical pending on severity of patient).
- GHOST Light team: Surgeon, CRNA, OR Tech, Nurse and Medic that can sustain operations for less than four days
- A surgical kicker located at BAF can be sent to increase number of days and supplies.

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# 1<sup>st</sup> GHOST-T Blood

Capability Classified



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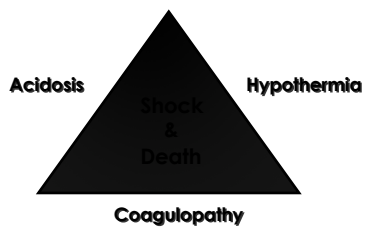
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## BLOODY VISCIOUS CYCLE



Brohi, K, et al. J Trauma, 2003.

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COMPONENT THERAPY VS  
FRESH WHOLE BLOOD



Composition of Component Therapy  
1U PRBC + 1U PLT + 1U FFP + 10 pk Cryo =

- 660 **COLD** mL
- Hct 29%
- Plt 87K
- Coag activity 65%
- 750 mg fibrinogen



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PERMISSIVE HYPOTENSION

- INTENTIONAL STRATEGY OF DELAYING RESUSCITATION WITH ISOTONIC CRYSTALLOID SOLUTION UNTIL HEMORRHAGE CONTROL.
- TARGET MAP IS 60
- “DON’T POP THE CLOT”



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**WALKING BLOOD BANK**



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**PRESCREENED AND TYPED**



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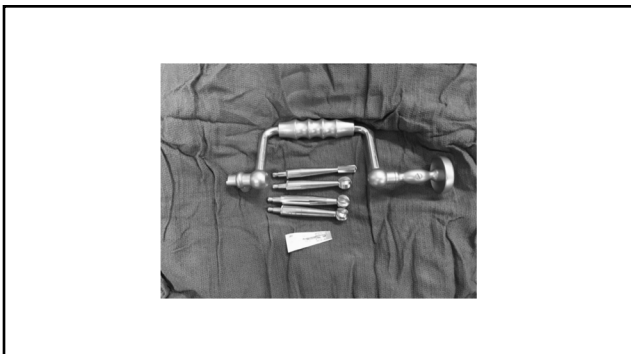
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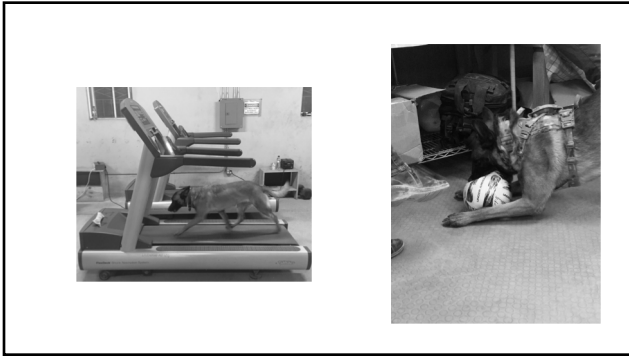
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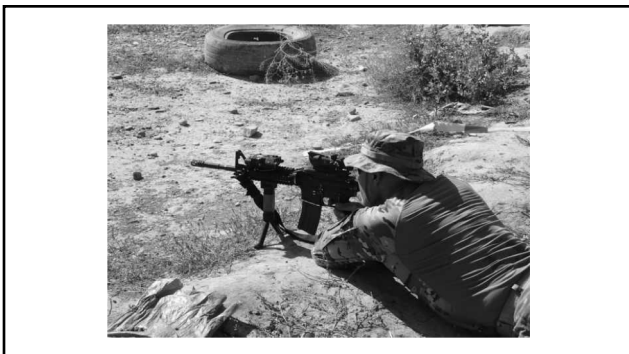
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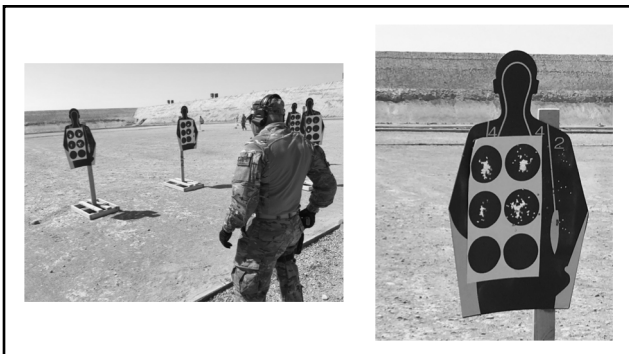
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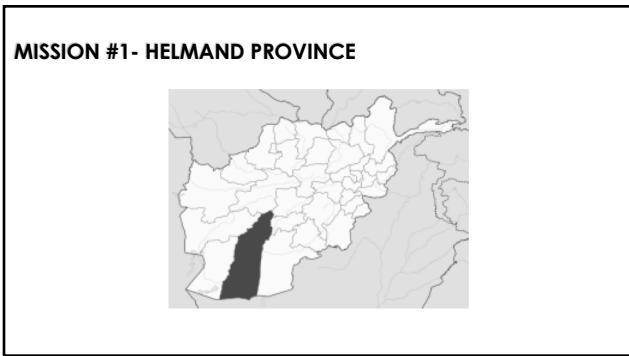
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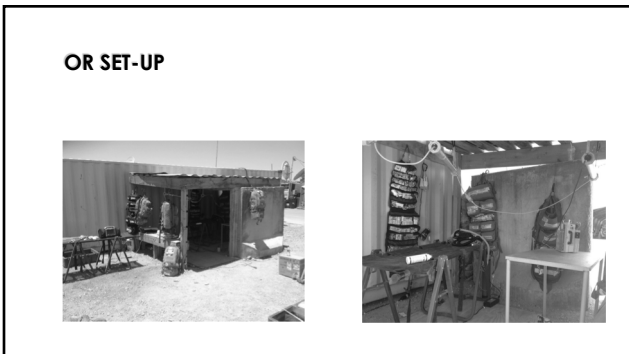
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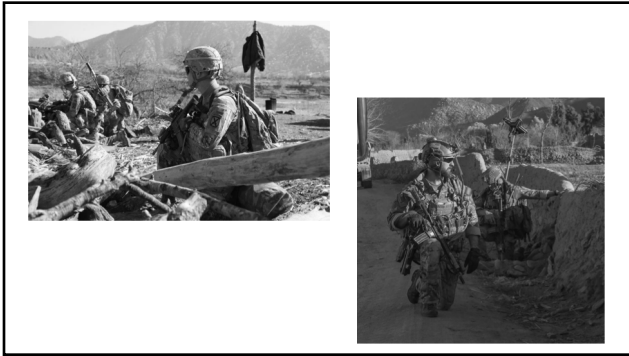
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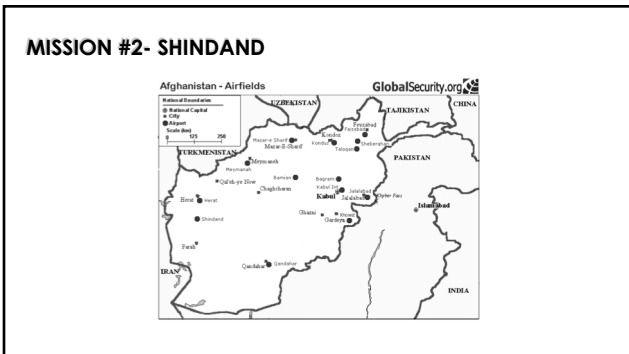
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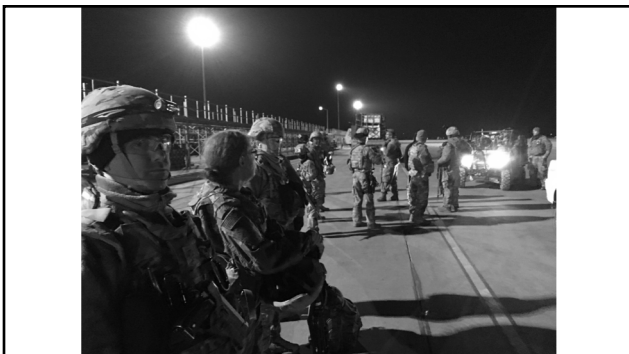
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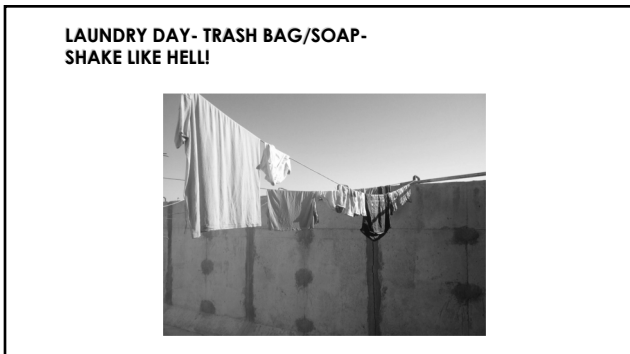
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**LEARN NEW WAYS TO USE A LATRINE?**



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**LEARN HOW TO USE A STAPLER**



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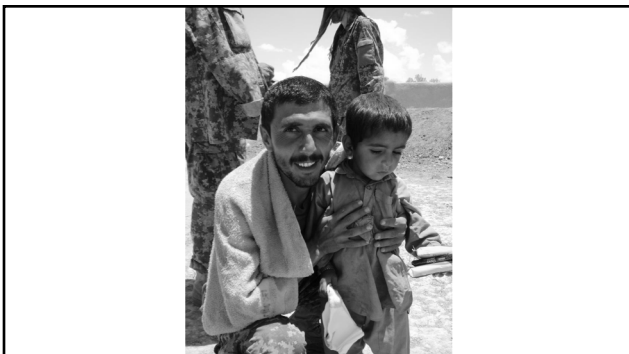
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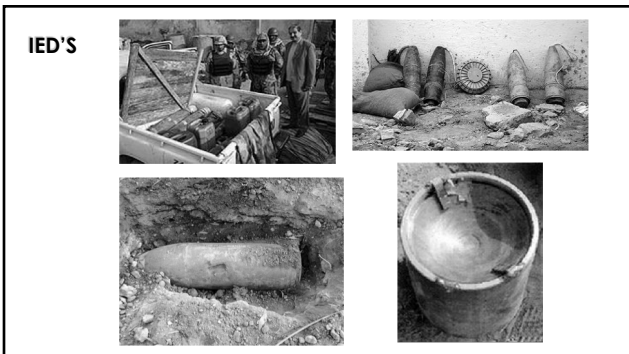
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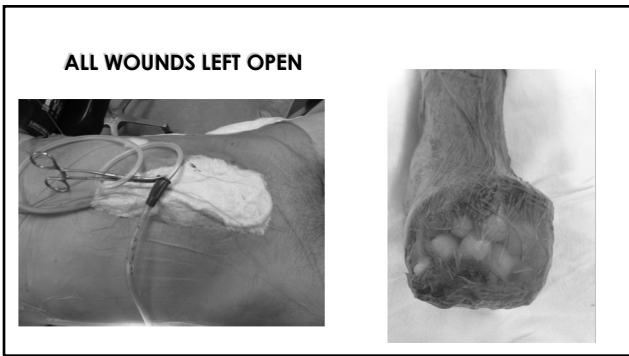
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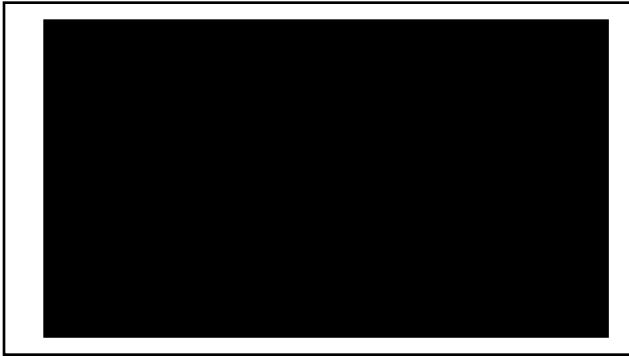
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WHAT SAVED LIVES

- COMBAT LIFESAVERS-MEDICS
- RAPID APPLICATION OF TOURNIQUETS
- RAPID MEDEVAC
- SKILLED MEDICAL ASSETS AND DAMAGE CONTROL SURGERY
- USE OF WHOLE BLOOD
- EARLY MEDEVAC TO NEXT LEVEL OF CARE

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