Researchers on the Battlefield

Military Trauma Research and Its Influence on Civilian Practice

Historical Overview

- Ancient times
  - Battlefield wounds
  - Transferability to civilian practice
  - Spread of knowledge through conquest and invasion
  - Codes of ethics
- Roman legions
  - Elite medical corps

Historical Overview

- Middle “Dark” Ages
- Renaissance
  - Gunpowder
  - Printing press

Historical Overview

- Amboise Pare
  - Army surgeon 16th century
  - “Father of Modern Surgery
- Jean Louis Petit
  - Screw tourniquet/amputations
- Dominque-Jean Larrey
  - “Flying Ambulance”
  - Wet dressings

Historical Overview

- Where is nursing?

Historical Overview

- Nightingale
  - Sanitation
  - Statistical analysis
  - Hospital organization
Historical Overview

- Air Evacuation
  - Korea, Vietnam
- On-site Research
  - Burn care
  - Vietnam

U.S. Army Institute of Surgical Research

- Dedicated to both laboratory and clinical trauma research.
- Ft Sam Houston/Brooke Army Medical

Deployed Combat Casualty Research Team

- Mission: to conduct and facilitate timely and critical health care research within the Theater of Operations.

Deployed Combat Casualty Research Team

- 1st since Vietnam
- Iraq
  - Baghdad
  - Balad
- Afghanistan
  - Kabul

Deployed Combat Casualty Research Team

- Structure
  - Army & Air Force
- Roles
  - Research Scientists
  - Research Assistants
  - Lab technician
### Deployed Combat Casualty Research Team

#### In-theatre Research
- Highly relevant to military medicine
- TBI
- Fluid resuscitation
- PTSD
- Compartment syndrome
- Intracranial pressure on ascent/descent
- Yoga prophylaxis

#### In-theatre Research
- Must protect all human research subjects
- Vulnerable populations
- Local citizens
- POWs
- Must not hinder combat ops or delivery of health care

### Deployed Combat Casualty Research Team

#### Considerations before IRB
- Can research only be conducted in theatre?
- Is the PI qualified to conduct the study?
- Is study scientifically sound?
- Will enough subjects be available?
- Is study feasible in time allotted?
- Is study acceptable to the commanders
  - Security
  - Political sensitivity
- Are resources available?
- Who is funding study?
- Who will own the data?

### Deployed Combat Casualty Research Team

#### Impact
- Increase IRB approved data collection and analyses
- Improve quality data acquisition
- Perform analyses that will positively impact healthcare delivery to the Warfighter and ultimately to any trauma patient

### Future

- Expand research cells in response to shift in combat action
- Establish research cells in line-of-care routes
- Include Navy researchers in joint mission
- Increase opportunities for doctoral study by military nurses
- More changes in civilian trauma care based on research findings

### Questions or Comments?