Civilian EMS Use of the Tempus Pro

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If there was one word to describe where significant progresses in EMS evolved from, what would it be?

WAR

Historical Perspective

- There are many EMS concepts, treatments and equipment that got their start in the military theater.

The Ambulance

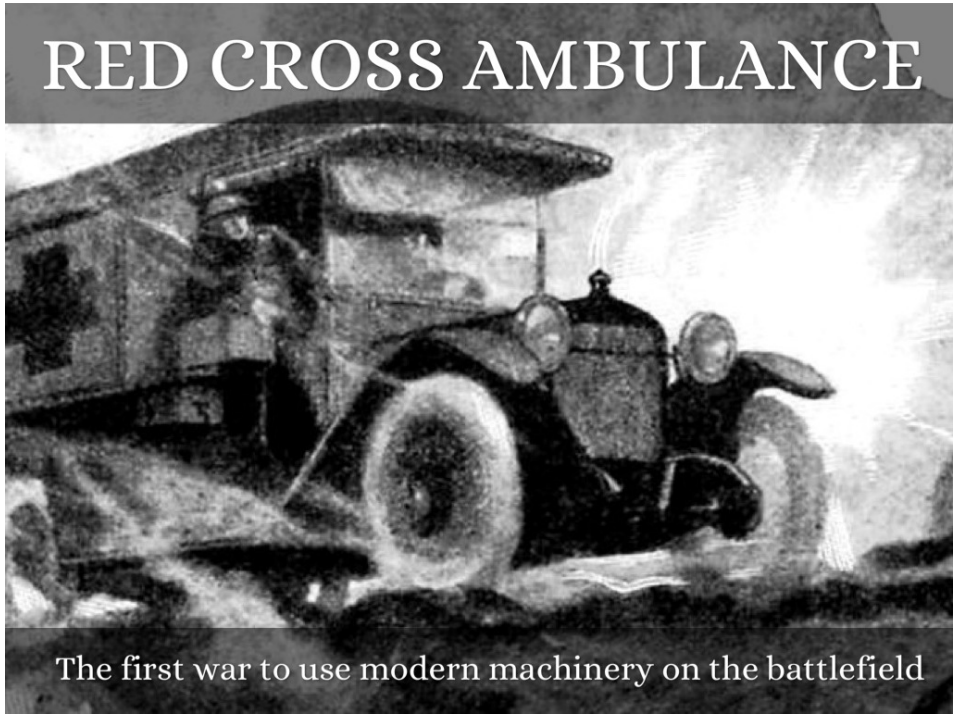
- 1797 – French Military

1865

- First Civilian Hospital Based Ambulance *Commercial Hospital and Lunatic Asylum* in Cincinnati OH
- Now University of Cincinnati Medical Center

1916

- WW I - First motorized ambulance
- Equipped with medical supplies



WW II

- staffing with medically trained personnel (Combat Medic)

1950s' and 60's

1970s


THE NEW YORK HOSPITAL
The New York Hospital
HIGH RISK INFANT TRANSPORT

Today

Helicopter (HEMS)

- 1944 – WW II first use of rotor wing aircraft

Korean Conflict
ca. 1951

Vietnam
ca. 1962

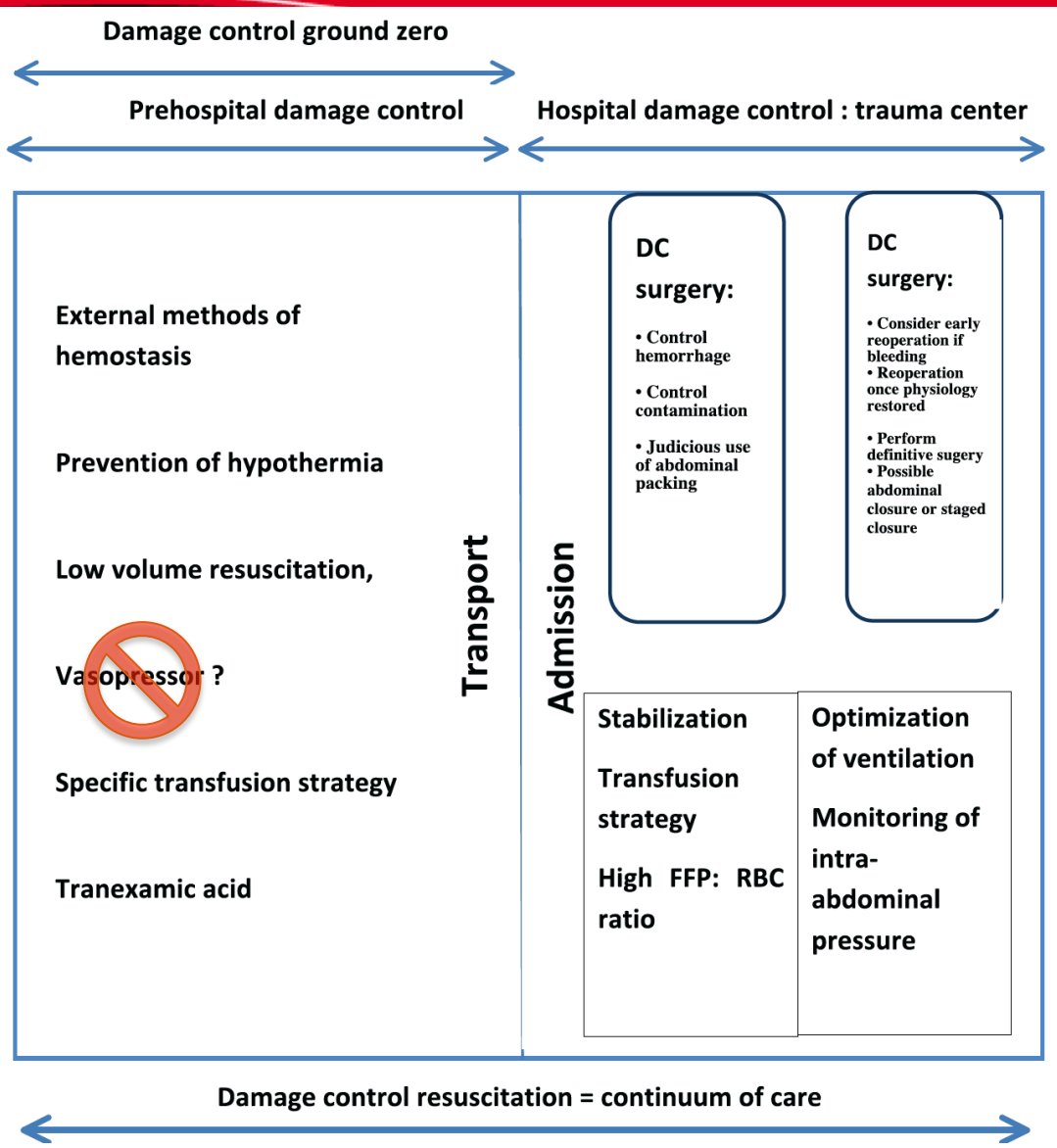
Today

What is the military's primary medical focus?

STOP BLEEDING!!

Damage Control Resuscitation

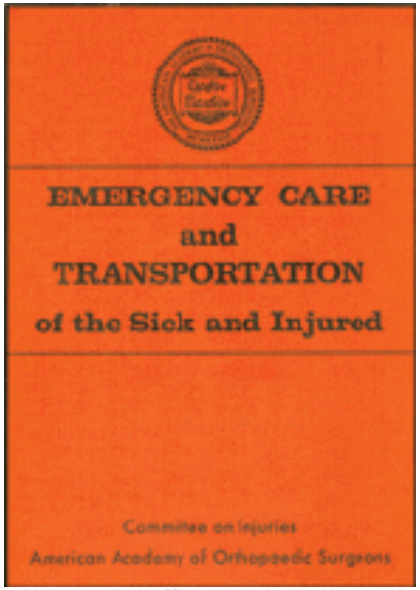
- Correct acidosis
- Prevent Hypothermia
- Correct coagulopathy



J.-P. Tourtier et al. / Annales Franc524 ¸aises d'Anesthe´sie et de Re´animation 32 (2013) 520–526

Tourniquets

- Initial use 4th Century BC – Alexander the Great's military
- …..through the early 1980s



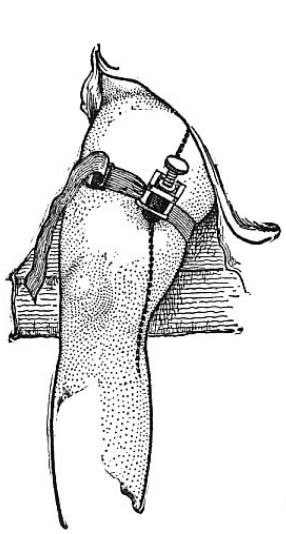


Figure F.

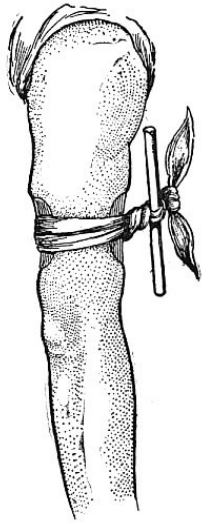


Figure G.

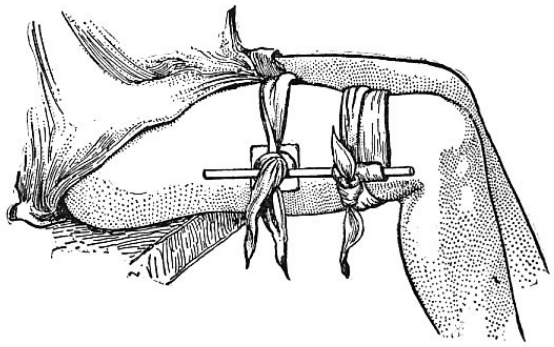


Figure H.

Tourniquets Today

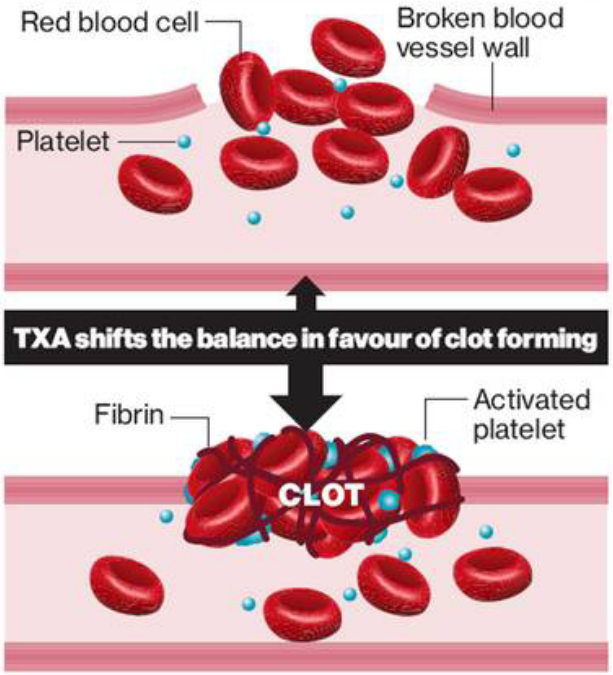
Hemostatic Agents

TXA – Tranexemic Acid

LIFE-SAVER HOW THE NEW DRUG WORKS

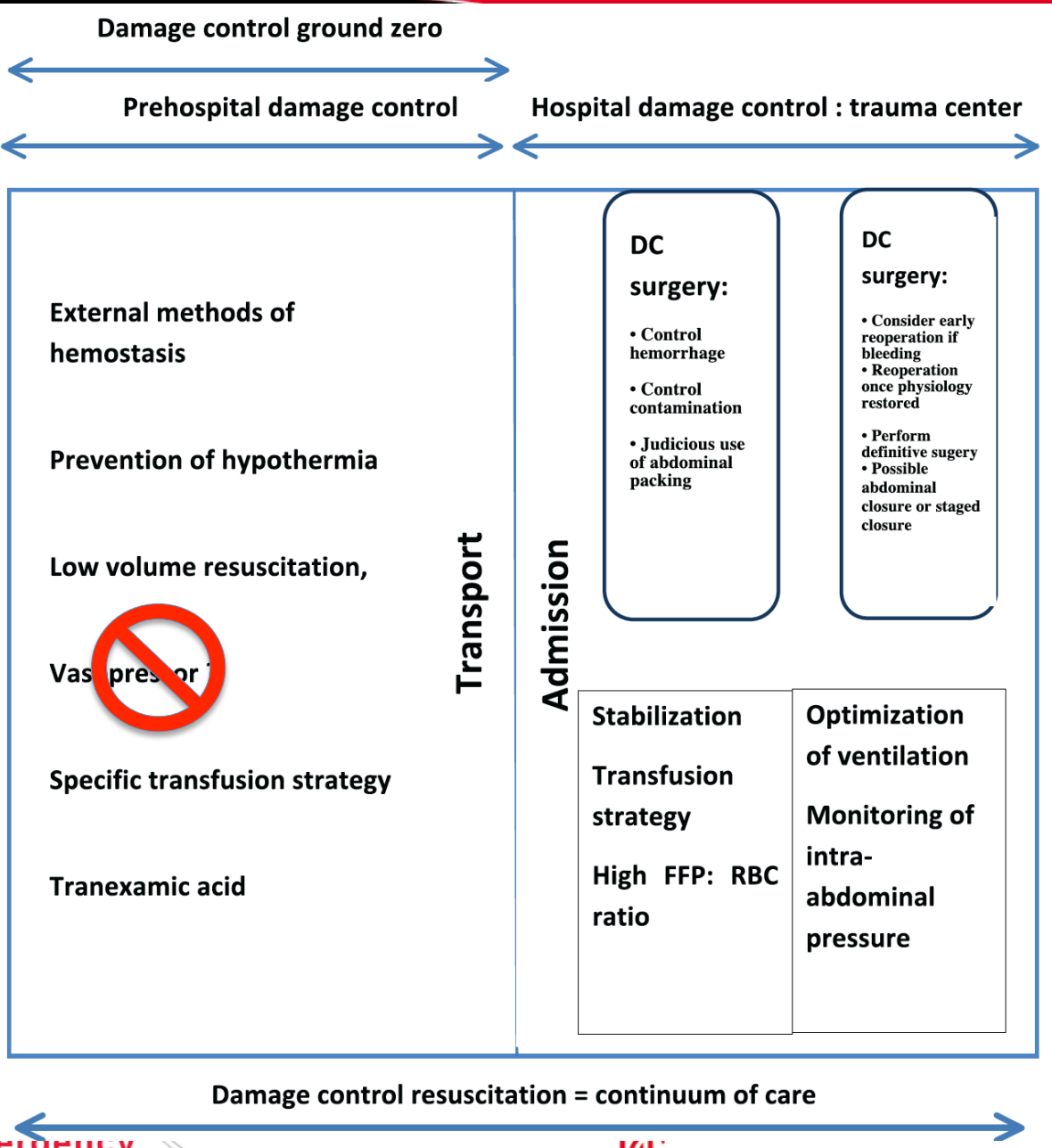
TXA was developed for use on the battlefields in Afghanistan, and becomes the first drug to be fast-tracked for use in the NHS under the Government's 'medicines innovation scheme'

Blood clotting involves a complicated interaction between red cells, platlets and a blood protein called fibrin which binds the clot together. Transexamic acid (TXA), known by its tradname Cyklokapron, speeds up the process of blood clotting by preventing the breakdown of fibrin. Normally, blood clotting is limited by a substance called plasmin, which dissolves clots, but transexamic acid blocks the formation of plasmin and so speeds up clotting.



Damage Control Resuscitation

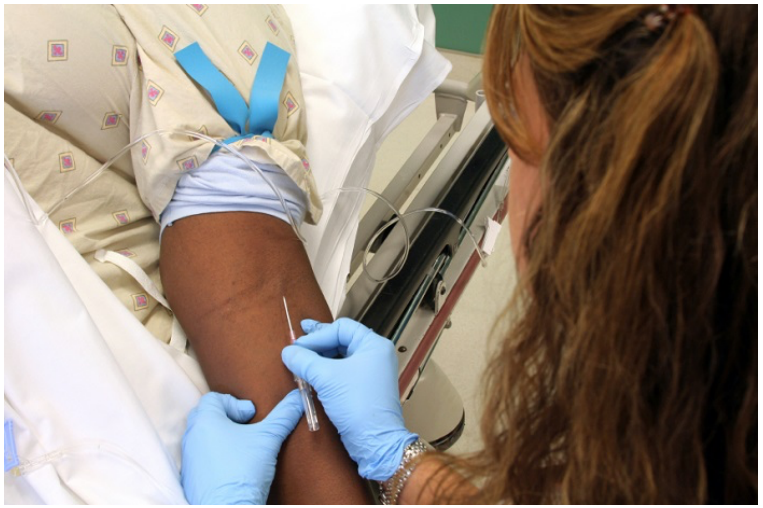
- Correct acidosis
- Prevent Hypothermia
- Correct coagulopathy



Permissive Hypotension

- From bilateral large bore IVs wide open… to…
- Make sure the patient is mentating.

FAST X



What else is new from our military brethren?

Tempus Pro:
A new type of Monitor

- Blood Pressure
- Masimo Rainbow Pulse Oximetry
  (PVI, PI, SpO_2, SpHb, SpMet, SpOC, SpCO,)
- Waveform Capnography
  (Intubated & non intubated patients)
- 3 & 5 & 12 Lead ECG with real time arrhythmia detection, ST & QT & 12 lead interpretation
- Invasive Blood Pressure
  (Up to 4 channels)

Guess what else it does?

Videolaryngoscopy (VL)

Field Ultrasound

Video Conferencing

ePCR?


TEMPUS PRO
Chart #41 - Secondary Survey: Injury/Assessment/Findings
Burns Assessment
Parkland Formula
Total Body Surface Area
Rule of 9's
Body Area | Anterior % | Posterior %
Head 0.48 0
Neck 0.29 0
Arms 0.89 0
Trunk 4.59 0
Legs 0 0
TBSA %: 6.34
1st Degree %: 2.07
2nd Degree %: 3.9
3rd Degree %: 0.37
Additional Burn Information
Burn Type
Singed Nasal Hair
Carbon in Mouth
Poor Ventilation
CO Level:
Undo
Redo
Clear
Back
Reset
Save & Close
Cancel

Currently use by:

- International Airlines
- Head of State Fleets
- Energy, Mining & Exploration
- Military & Government Agencies
  - USSOCOM
  - US State Department
  - National Guard
  - FBI
- Various Military

Cincinnati Fire Department

- Benefactor purchased 4 units for a pilot study
- Purchase guided by UC Trauma Surgeon who serves in the Air Force (Dr. Jay Johannigman)
- Deployed 4 units
  - 3 with EMS supervisors
  - One with Medical Director/EMS Fellows
- Goal: to identify the utility of the device in the civilian sector

Continuous Vital Sign Transmission

Potential uses

- Photo of car wrecks
- Video for complicated refusals
- Photo of specific scenes
- Photo documentation of skills (ET)

Questions?