The German Approach for Training Doctors for TCCC
Concept and evaluation of the effect of full scale training.

I declare no conflict of interests

High quality medical support as soon as possible

The provision of high-quality early intervention has been shown to improve outcomes, while any delay either before care is initiated or between subsequent levels of care, will be deleterious to patient outcomes.


Once injured, the principal factor that determines mortality, morbidity, and residual disability is time to required level of medical care. This is true of all medical emergencies, but is of overriding significance when dealing with surgical emergencies.

Early use of physicians in the field - History

Operational Casualty Flow – TCCC plus?
Advanced Field / Resuscitative Care - AFC

- beyond a single Medic with an aidbag, but not in prehospital/Role 1 environment
- Inclusion of advanced procedures at CCP/ BAS, FOB Aid Station
- SOF Medic 1BD or forward medical teams
- Not a single player game: more Equipment and training and more advanced trained providers and medical teams

- Advanced procedures could be:
  - Blood products (Fresh whole blood, FDP, fibrinogen, ppsb)
  - Enhanced bleeding control – LEROA, Clamshell
  - Advanced Airway management/Suctioning/Ventilation
  - Enhanced diagnostic tools – Ultrasound, ARGO’s
  - Advanced Monitoring and Resuscitation lines
  - Improved Hypothermia Prevention
  - Advanced Medications (Sedation, Antibiotics…)

- It is NOT PFC or Role 2
- It is Not a single player... due to regulations... often a doc!

The AJP 4-10 Timeline 1-2-4

1- primary (definitive) surgery for critically injured patients within one hour - if not achievable...
2- two hours for the provision of Damage Control Surgery (DCS)
4- four hours for Primary Surgery


The new Timeline of medical support “10-1-2”

Allied Command Operations (ACO) Directive 83-1 on Medical Support to Operations
German doctrine – MPT far forward
forward use of emergency EMS physicians as Mobile Physician Team MPT "BAT – Beweglicher ArztTrupp"
German Chain of survival – MedEvac chain

Forward MedEvac

StratAirMedEvac

MedEvac MPT (physician)

Role 1

Role 2 & 3

Role 4

First aid MedEv & role 1

German doctrine – MPT far forward

Docs on Forward Air MedEvac NH 90 - Mali

The German concept for the use of physicians in the field
Difficulties with physicians in mission

Good medicine in hospital must not be good medicine in the field

A good physician in the hospital is NOT at the same time a good physician in the field

Difficulties with physicians in mission

- civil emergency medicine training / certification

  former training of military physicians for the mission

  First two years of internship:
  - ICU
  - Emergency Department
  - Ambulance "EMS"

  civil emergency medicine standard training for EMS Physicians according to civil principles

  timeline

  years

  * Notfall & Rettungsmedizin (2011) DOI: 10.1007/s10049-011-1478-0

Difficulties with physicians in mission

- civil emergency medicine training / certification
- mostly internal medicine cases
- rarely penetrating trauma
- no use of civil emergency medicine SOP's
- use of different algorithms
Difficulties with physicians in mission

- civil emergency medicine training / certification
- mostly internal medicine cases
- rarely penetrating trauma
- no use of civil emergency medicine SOP’s
- use of different algorithms
- not working under stress and danger

• no special recruitment / no selection process of military physicians

• no real physical fitness test
• no military and tactical training and behavior required
The right mind set...  

...is crucial for a military physician in the field  

- to improvise  
- to think “outside the box”  
- to work outside the comfort zone  
- to know & understand the tactical behavior and mission target  
- to train and study how to operate as a team member in tactical situations  

Civil treatment of trauma patients  

The patient leads the medical treatment & procedures  

Tactical Combat Casualty Care  

The tactical situation determines the actions  

Requirements for the military physician  

- medical competence  
  - trauma management, invasive procedures  
- psychological strength  
  - tactical situation, danger, fear, mindset  
- physical power  
  - personal gear, environment, fight, casualty transport  
- tactical proficiency  
  - military training, knowing TTP’s, comms etc.
How do we train our physicians for the mission?

"additional modular formation"

- First two years of internship including:
  - ICU
  - Emergency Department
  - Ambulance "EMS"

Module 3 – Team Training TCCC

Skills-Training

(stopping the bleed & invasive procedures)

Timeline:

1 year

Civil emergency medicine standard training for EMS Physicians according to civil principles

"additional modular formation"

- Module 1: Teamtraining TCCC
- Module 2: Skills-Training

Train as you fight.

Combination of the learned & verifying of the performance

Module 3 – Team Training TCCC

First two years of internship including:

- ICU
- Emergency Department
- Ambulance "EMS"

According to civil principles
Train hard - fight easy: Evaluation of the individual handling confidence after the intense „full scale“ TCCC Training for Emergency Physicians of the Bundeswehr

How do we train our physicians for the mission?

„additional modular formation“

First two years of internship
Including:
- ICU
- Emergency Department
- Ambulance „EMS“

Teamtraining TCCC
Skills-Training
(stopp the bleed & invasive procedures)

PHTLS
civil emergency medicine standard training for EMS Physicians according to civil principles

Evaluation of course participants at a time before and after M2 / M3
How do we train our physicians for the mission?

"additional modular formation"

Find two years internship: including
- ICU
- Emergency Department
- Ambulance EMS

How do we train our physicians for the mission?

"additional modular formation"

Find two years internship: including
- ICU
- Emergency Department
- Ambulance EMS

Self-assessment of the individual handling confidence

medical procedures under class room conditions

before
after

Module 2 Skills Training

"I dare to, the following safely perform medical procedures under class room conditions."

Josse F. Train hard - fight easy :. University Ulm; 2018. DOI: 10.18725/OPARU-10226
Self-assessment of the individual handling confidence

medical procedures under mission conditions

before
after

Module 3 TCCC Training

*I dare to, the following safely perform medical procedures under mission conditions,

Ty = 0,562

 Josse F. Train hard - fight easy: Evaluation of the individual handling confidence after the intense "full scale" TCCC Training for Emergency Physicians of the Bundeswehr. University Ulm; 2018. DOI: 10.18725/OPARU-10226

Conclusion

Improvement of the individual handling confidence

after the intense "full scale" TCCC Training

 Josse F. Train hard - fight easy: Evaluation of the individual handling confidence after the intense "full scale" TCCC Training for Emergency Physicians of the Bundeswehr. University Ulm; 2018. DOI: 10.18725/OPARU-10226

Performance of Skills under tactical situation

class room vs. tactical situation

 Josse F. Train hard - fight easy: Evaluation of the individual handling confidence after the intense "full scale" TCCC Training for Emergency Physicians of the Bundeswehr. University Ulm; 2018. DOI: 10.18725/OPARU-10226
Global performance under tactical situation

Improvement of the global performance at the 2nd day

Communication competence ... human performance

... needs further optimization!

Is it worth it?

YES
Physicians are able to offer advanced procedures & advanced field care.
... but not in the hot zone.
Training and education needs time but is effective!
They have to be **professionally** and **military** committed.
& to be well trained and professional in both - for **medical** and **tactical** aspects in the field.
The physician needs the right mindset as an tactical asset with medical knowledge.
selection & training of physicians in tactical medicine need more protocols / guidelines.

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**questions?**
email: florentjoos@me.com

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**summary**

- Physicians are able to offer advanced procedures & advanced field care.
- ... but not in the hot zone.
- Training and education needs time but is effective!
- They have to be **professionally** and **military** committed.
- & to be well trained and professional in both - for **medical** and **tactical** aspects in the field.
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