Telemedicine in the German Armed Forces
Network of experts for disaster medicine


Institute of Aerospace Medicine, Cologne
* Sanitätsamt der Bundeswehr, München/Andernach

Second United Nations International UN-SPIDER Workshop
„Disaster Management and Space Technology–Bridging the Gap“
Table of Contents

- Institute of Aerospace Medicine
- Definition of Telemedicine
- Status - The German Armed Forces Telemedicine Network
- Prospects - New Applications in the Telemedicine Network
- Conclusion
Institute of Aerospace Medicine

Our task: Health and efficiency of humans in the mobile society

Long duration stay
Outside the earth

Improvement in effectiveness and efficiency of sociological and technical systems
Definition of Telemedicine

Telemedicine is practice of health care using interactive audio, visual and data communication (WHO)

Telemedicine is the capacity to practise medicine at a distance through the utilisation of telecommunication (H.C.Holoway, NASA)
Status - The German Armed Forces Telemedicine Network

Europe
- Since 1998, 52 TW in Germany
- Until 2007, EUFOR
  3 TW in FLaz Rajlovac
- Since 2000, KFOR
  3 TW in FLaz Prizren
  Until 2003,
  1 TW in RZ Eribino

Africa
- Gabun and Kongo in 2006

Asia
- Since 2002/2003, ISAF
  3 TW in FLaz Mazar-e Sharif
  Since 2004
  3 TW in RZ Feyzabad
  Since 2003/04
  3 TW in RZ Kunduz
The Telemedicine Workstations inside the Locations

**Supplier**

**Training vessel**

**Frigate**

**Field hospital**
Realised Applications in the Telemedicine Network

**Teleradiology**

**Teledermatology**

**Teledentistry**
Realised Applications in the Telemedicine Network

**Telemicrobiology**

**Teleradiobiology**

**Tele-laboratory**
Prospects - New Applications in the Telemedicine Network

Development of
- Tele-Surgery
- Tele-Neurosurgery
- Tele-Gynaecology
- Tele-Otorhinolaryngology (ear, nose, throat medicine)

for
- improvement of acute care in accident surgery and disaster medicine
- intraoperative Tele-Tutoring
- Tele-Education and Tele-Training
Tele-Surgery – Emergency Situations

- Surgical and radiological online expertise
- Improvement of acute care in accident surgery
Tele - Neurosurgery – Intraoperative Tele - Tutoring

- Neurosurgical expertise throughout the world
- Supporting general surgeons performing cranial surgery
Tele – Education and Tele-Training

- Ultrasound Diagnosis
- Dentistry and Internal Medicine
Status of the Telemedicine Network

- More than 100 systems operating
- Medical and technical 24/7 combined hotline is available
- First and second opinion service is everyday life

Efficiency and costs

- More than 2 € saved per 1 € spent in direct costs
- Decrease of repatriations
- Increase of treatment quality by expert teleconsultations
- Cost reductions of secondary care/rehabilitation
Conclusions

Telemedicine abilities and advantages

- Support diagnosis und therapies in emergencies and disasters
- Triage help after accidents and attacks
- Common education and training
- Contributions to the reconstruction of the health care systems
- World - wide available
Thanks for your attention.
Telemedicine support in the pediatric surgery

After the operation          7 days later              Today

Football