Telemedicine – Status and Future


Institute of Aerospace Medicine, Cologne

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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)
Relations of patient and information

Yesterday
Transport of the patients

Patient

Physician

Medical Specialists

Today and tomorrow
Export of knowledge and expertise
Status

Realized applications inside the Telemedizin Network for medical services

**Teleradiology**

**Teledermatology**

**Teledentistry**
.... further realized applications
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
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
Conclusions

Telemedicine abilities and advantages

- Support diagnosis and 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