

# Examples for best practices in eHealth

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## eHealthChallenges /1

- **Interoperability for an international Electronic Health Record (EHR)**
    - Patient summary
    - **Personal health record (PHR)**
  - Technical standards
    - International harmonization
      - HL7, CDA, ...
  - Semantic interoperability
    - Catalogue of diagnoses
      - ICD-10
    - International catalogue of procedures
  - Usability
  - Privacy
  - Blackout strategy
  - ...
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## eHealth Challenges /2

- **Decision support**
- Support for structured documentation
- Usability – user experience
  - Presentation of data, information and knowledge
- Filtering of relevant documents / information retrieval
- **IoMT – i4.0 in medicine**
  - Monitoring and privacy
  - Integration of Wearables
- **Big data in medicine**
  - Predictive analytics
  - Precision medicine
- ...

## eHealth Applications in Austria

- **Electronic Health Record**
  - Called ELGA – Elektronische Gesundheitsakte
  - Discharge letter
  - Radiology findings
  - Laboratory findings / LOINC as a documentation standard
- 2016 – all public hospitals
- 2017+ - doctors, private hospitals, pharmacies, ...
- eCard as a key-card
  - Access for patients
- **eMedication**
  - Pilot phase
- **Health portal – patient information**
  - <https://www.gesundheit.gv.at/>
  - Increasing health literacy

**Has to be extended!**

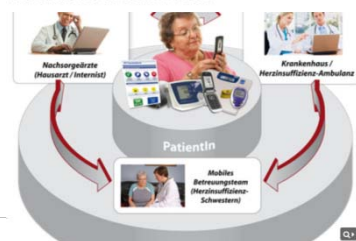
## Personal eX-ray Database

- EU-Project PALANTE (PATient Leading and mANaging their healThcare through EHealth).
  - [https://www.youtube.com/watch?v=UwyxnmNW5\\_0](https://www.youtube.com/watch?v=UwyxnmNW5_0)
- Individual / personal documentation of X-ray dosis due to medical examinations
  - Compared to live-long X-ray exposition
- Awareness for doctors and patients
  - Presentation of the information

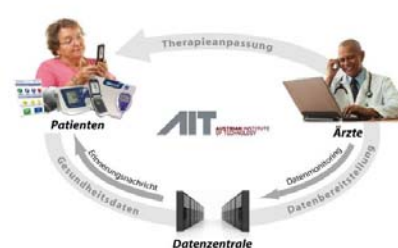
## Telemonitoring

- Telemonitoring for patients with **cardiac insufficiency**
  - [http://www.bmgf.gv.at/cms/home/attachments/4/5/9/CH1417/CMS1423479059781/9\\_ait\\_factsheet\\_telemonitoring\\_herzinsuffizienz.pdf](http://www.bmgf.gv.at/cms/home/attachments/4/5/9/CH1417/CMS1423479059781/9_ait_factsheet_telemonitoring_herzinsuffizienz.pdf)
  - <https://herzmobiltirol.tirol-kliniken.at/>
  - Communication with a mobile team of doctors and nurses

HerzMobil Tirol bewährt sich



Im Netzwerk von HerzMobil Tirol stehen die Patientinnen im Mittelpunkt.



## Game Based Therapy

- [https://www.physioaustria.at/system/files/general/phy\\_inform\\_jun\\_fin.pdf](https://www.physioaustria.at/system/files/general/phy_inform_jun_fin.pdf)



## Artificial Intelligence Applications

- **WATSON**
  - <https://www.ibm.com/watson/>
  - Feature extraction
    - Coding of diagnoses, procedures, medication
    - Patient summary
- Ongoing pilot project in a hospital in Graz
- Further projects in Austrian hospitals
- **Much more is possible**
  - Decision support
    - Diagnosis and therapy

## Apps

- App for liver transplant patients
    - Reminder
    - Confirmation
    - Monitoring
    - ...
  - Example:
    - Increasing the compliance of transplant patients
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## eHealth Project Data Base

- Developed in the province of Styria
  - Structured documentation of eHealth applications and projects
    - Information system about eHealth applications
    - Information system for companies, researchers, developers
    - Information system for funding projects
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## Further eHealth Applications

- ePrescription
    - Extension of eMedication
    - Automatic examinations for interactions, allergies
  - eHealth portal
    - Social media and patient empowerment
  - **eVaccination record**
  - Active assisted living (AAL) projects
  - Mother / child record
  
  - Wearables
- 

## Benefits of eHealth

- **Patient**
    - Patient portal
  - **Medical doctors and other health care providers**
    - Access to relevant data / Information / knowledge
    - Assistance for documentation
  - **Health politics and purchaser**
    - Health care planning
    - Quality assurance
  - **Medical Research**
    - **Outcome research**
    - epidemiology
      - Pharmaeepidemiology / pharmacoconomics
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[www.fh-joanneum.at](http://www.fh-joanneum.at)  
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*Thank you for your attention!*

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